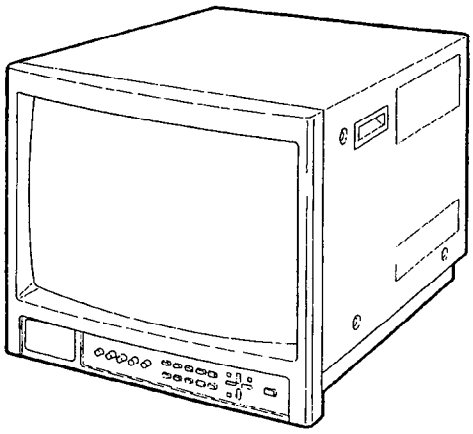
ORDER NO. VED9706235C2

Service Manual

Colour Video Monitor

BT-M2090Y

Chassis No. BT



The service technician is required to read and follow the "Safety Precautions" and "Important Safety Notice" in this service manual.

Specifications

System: NTSC 3.58MHz/NTSC 4.43MHz/PAL

Power Source: AC 230V (220~240V) 50/60Hz

Max Amps: 0.6A

Picture Tube:
50cm measured diagonally, 90° deflection, in-line gun, medium-high-definition cathode-ray, "tube" trio-dot type (dot pitch of 0.4mm), EBU standard phosphor

Audio Power Output: 1.6W

Built-in Speaker: 9×5 cm (3-9/16"×2") oval×1

Screen Size (W×H): 399mm×298mm (15-11/16"×11-3/4")

Scanning Frequency:
H: 15.734kHz (NTSC 3.58/4.43MHz)
15.625kHz (PAL)
V: 59.94Hz (NTSC 3.58/4.43MHz)
50Hz (PAL)

Horizontal Resolution:
750 TV lines or more

Color Temperature: 6500k ; x=0.313, y=0.329
9300k ; x=0.283, y=0.297
(selectable)

Video Inputs

Composite Video:
INPUT A, B (2 lines), BNC×2 each
(with 1 bridge-connected output)
Termination switches provided 1.0 Vp-p, 75Ω, negative sync

Y/C:
Y/C (1 line), DIN (4-pin)×2
(with 1 bridge-connected output)
Termination switch provided
Y; 1.0Vp-p, 75Ω, negative sync
C (NTSC 3.58/4.43MHz);
0.286Vp-p, 75Ω
C (PAL); 0.3Vp-p, 75Ω

Analog RGB:
RGB/COMPO (SDI)
(1 line: common with Y, R−Y, B−Y component)
BNC×6
(with 3 bridge-connected output)
Termination switches provided
R, B; 0.7Vp-p, 75Ω
G; 0.7Vp-p, 75Ω
G on sync; 1.0Vp-p, 75Ω, negative sync

Y, R−Y, B−Y Component:
RGB/COMPO
(1 line: common with analog RGB)
Y; 1.0Vp-p, 75Ω, negative sync
R−Y, B−Y; 0.7Vp-p, 75Ω

Panasonic

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⚠ **WARNING**

This service information is designed for experienced repair technicians only and is not designed for use by the general public. It does not contain warnings or cautions to advise non-technical individuals of potential dangers in attempting to service a product. Products powered by electricity should be serviced or repaired only by experienced professional technicians. Any attempt to service or repair the product or products dealt with in this service information by anyone else could result in serious injury or death.

External Sync Input:
SYNC (1 line)
BNC×2 (with 1 bridge-connected output)
0.2~4.0Vp-p composite sync, 75Ω, negative sync Termination switches provided

Audio inputs: AUDIO A, B RGB/COMPO (3 lines), RCA×2 each (with 1 bridge-connected output) 500mVrms, high impedance

Tally/Remote Terminal:
TALLY/REMOTE, DIN (8-pin)×1

Operation
Temperature: 0°C~+40°C (32°F~104°F) (20~80% RH)

Dimensions
(W×H×D): 449mm×431mm×511mm (17-3/4"×17"×20-1/8")

Weight: 30kg (66lbs)

Provided Accessory: Power Cord×1

Specifications are subject to change without notice.
Weight and dimensions shown are approximate.

Contents

SAFETY PRECAUTIONS

1. The design of this product contains special hardware, many circuits and components specially for safety purposes.
   For continued protection, no changes should be made to the original design unless authorized in writing by the manufacturer. Replacement parts must be identical to those used in the original circuits. Service should be performed by qualified personnel only.
2. Alterations of the design or circuitry of the products should not be made. Any design alterations or additions will void the manufacturer's warranty and will further relieve the manufacturer of responsibility for personal injury or property damage resulting therefrom.
3. Many electrical and mechanical parts in the products have special safety-related characteristics. These characteristics are often not evident from visual inspection nor can the protection afforded by them necessarily be obtained by using replacement components rated for higher voltage, wattage, etc. Replacement parts which have these special safety characteristics are identified in the parts list of Service manual. **Electrical components having such features are identified by shading on the schematics and by (⚠)on the parts list in Service manual.** The use of a substitute replacement which does not have the same safety characteristics as the recommended replacement part shown in the parts list of Service manual may cause shock, fire, or other hazards.
4. **Don't short between the LIVE side ground and ISOLATED(NEUTRAL) side ground or EARTH side ground when repairing.**
   Some model's power circuit is partly different in the GND. The difference of the GND is shown by the LIVE : (⊥) side GND, the ISOLATED(NEUTRAL) : (⏚) side GND and EARTH : (⏚) side GND. Don't short between the LIVE side GND and ISOLATED(NEUTRAL) side GND or EARTH side GND and never measure with a measuring apparatus (oscilloscope etc.) the LIVE side GND and ISOLATED(NEUTRAL) side GND or EARTH side GND at the same time.
   If above note will not be kept, a fuse or any parts will be broken.
5. If any repair has been made to the chassis, it is recommended that the B1 setting should be checked or adjusted (See ADJUSTMENT OF B_1 POWER SUPPLY).
6. The high voltage applied to the picture tube must conform with that specified in Service manual. Excessive high voltage can cause an increase in X-Ray emission, arcing and possible component damage, therefore operation under excessive high voltage conditions should be kept to a minimum, or should be prevented. If severe arcing occurs, remove the AC power immediately and determine the cause by visual inspection (incorrect installation, cracked or melted high voltage harness, poor soldering, etc.). To maintain the proper minimum level of soft X-Ray emission, components in the high voltage circuitry including the picture tube must be the exact replacements or alternatives approved by the manufacturer of the complete product.
7. Do not check high voltage by drawing an arc. Use a high voltage meter or a high voltage probe with a VTVM. Discharge the picture tube before attempting meter connection, by connecting a clip lead to the ground frame and connecting the other end of the lead through a 10kΩ 2W resistor to the anode button.
8. When service is required, observe the original lead dress. Extra precaution should be given to assure correct lead dress in the high voltage circuit area. Where a short circuit has occurred, those components that indicate evidence of overheating should be replaced. Always use the manufacturer's replacement components.
9. **Isolation Check**
   (Safety for Electrical Shock Hazard)
   After re-assembling the product, always perform an isolation check on the exposed metal parts of the cabinet (antenna terminals, video/audio input and output terminals, Control knobs, metal cabinet, screwheads, earphone jack, control shafts, etc.) to be sure the product is safe to operate without danger of electrical shock.

(1) **Dielectric Strength Test**
The isolation between the AC primary circuit and all metal parts exposed to the user, particularly any exposed metal part having a return path to the chassis should withstand a voltage of 3000V AC (r.m.s.) for a period of one second.
(. . . . Withstand a voltage of 1100V AC (r.m.s.) to an appliance rated up to 120V, and 3000V AC (r.m.s.) to an appliance rated 200V or more, for a period of one second.)
This method of test requires a test equipment not generally found in the service trade.

(2) **Leakage Current Check**
Plug the AC line cord directly into the AC outlet (do not use a line isolation transformer during this check.). Using a "Leakage Current Tester", measure the leakage current from each exposed metal part of the cabinet, particularly any exposed metal part having a return path to the chassis, to a known good earth ground (water pipe, etc.). Any leakage current must not exceed 0.5mA AC (r.m.s.).

• Alternate Check Method
Plug the AC line cord directly into the AC outlet (do not use a line isolation transformer during this check.). Use an AC voltmeter having 1000 ohms per volt or more sensitivity in the following manner. Connect a 1500Ω 10W resistor paralleled by a 0.15μF AC-type capacitor between an exposed metal part and a known good earth ground (water pipe, etc.). Measure the AC voltage across the resistor with the AC voltmeter. Move the resistor connection to each exposed metal part, particularly any exposed metal part having a return path to the chassis, and measure the AC voltage across the resistor. Now, reverse the plug in the AC outlet and repeat each measurement. Any voltage measured must not exceed 0.35V AC (r.m.s.). This corresponds to 0.5mA AC (r.m.s.).

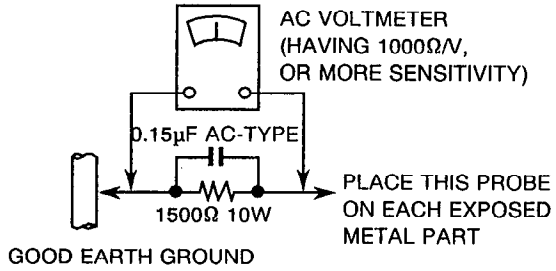
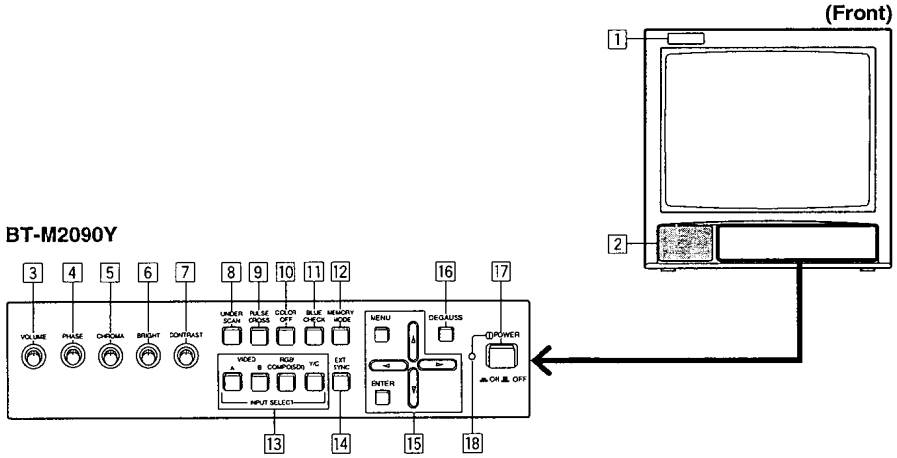


Fig.A

CONTROLS AND FEATURES (FRONT)



[1] Tally lamp
Glows to indicate when a tally signal is input to the TALLY/REMOTE terminal on the rear panel.

[2] Speaker

[3] VOLUME control
Turn to adjust speaker volume.

[4] PHASE control
Turn to adjust picture hue, using natural skin colour as a reference.

[5] CHROMA control
Turn to adjust picture colour density according to your requirements.

[6] BRIGHT control
Turn to adjust picture brightness according to your requirements.

[7] CONTRAST control
Turn to adjust the picture contrast according to your requirements.

[8] UNDER SCAN switch
Push to display the whole picture on screen by reducing display area dimensions.

[9] PULSE CROSS switch
Push to check the retrace period (sync signal) by delaying input signal phase.

[10] COLOR OFF switch
Push to eliminate colour signals and display a black-and-white picture.

[11] BLUE CHECK switch
Push to eliminate red and green colour signals and display a monochrome blue picture.

[12] MEMORY MODE switch
Push to adjust the picture by recalling the adjustment data that you stored in memory.

[13] INPUT SELECT switches
Push to select a rear terminal video signal input.

[14] EXT SYNC switch
Push to synchronise the monitor with an external sync signal. This function is effective regardless of signal input.

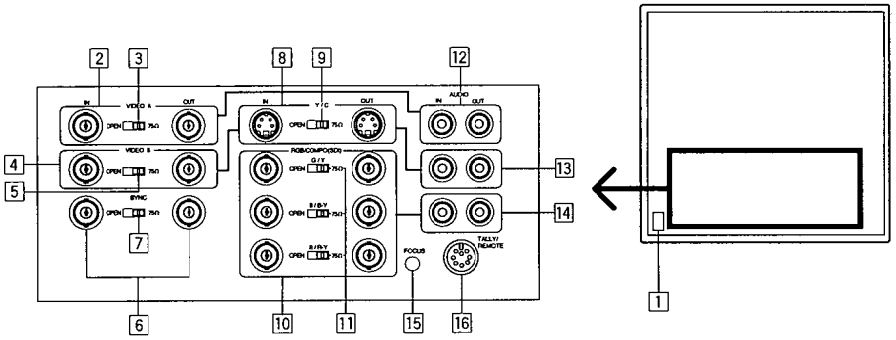
[15] MENU controls
Use to operate on-screen menu functions.

[16] DEGAUSS switch
Push to demagnetise the picture tube.

[17] POWER switch
Press to turn the power on or off.

[18] POWER indicator
Glows to indicate that power is on.

TERMINALS AND FEATURES (REAR)



[1] Power socket
Connect to an AC outlet (230 V(220 – 240 V) AC, 50/60 Hz) using the provided power cord.

[2] VIDEO A terminals
Composite video signal input terminal and bridge-connected output terminal.

[3] VIDEO A termination switch
Set to OPEN for bridged connection; set to 75Ω for input signal only.

[4] VIDEO B terminals
Composite video signal input terminal and bridge-connected output terminal.

[5] VIDEO B termination switch
Functions as for [3].

[6] SYNC terminals
External sync signal input terminal and bridge-connected output terminal. Input an external composite sync signal to these terminals when inputting a video signal without a sync signal, or when synchronising the monitor with an external sync signal.

[7] SYNC termination switch
Functions as for [3].

[8] Y/C terminals
Input terminal of Y/C signals and bridge-connected output terminal.

[9] Y/C termination switch
Functions as for [3].

[10] RGB/COMPO(SDI) terminals
Input terminal of analogue RGB signals or Y/B-Y/R-Y signals and bridge-connected output terminal. For analogue RGB signals, also accepts a G signal including a sync signal.

[11] RGB/COMPO(SDI) termination switch
Functions as for [3].

[12] AUDIO A terminals
Audio signal input terminal and bridge-connected output terminal. Linked with the VIDEO A terminals so that AUDIO A terminals and VIDEO A terminals are selected simultaneously.

[13] AUDIO B terminals
Audio signal input terminal and bridge-connected output terminal. Linked with the VIDEO B or Y/C terminals so that AUDIO B terminals and VIDEO B or Y/C terminals are selected simultaneously.

[14] AUDIO RGB/COMPO(SDI) terminals
Audio signal input terminal and bridge-connected output terminal. Linked with the RGB/COMPO(SDI) terminals so that AUDIO RGB/COMPO(SDI) terminals and RGB/COMPO(SDI) terminals are selected simultaneously.

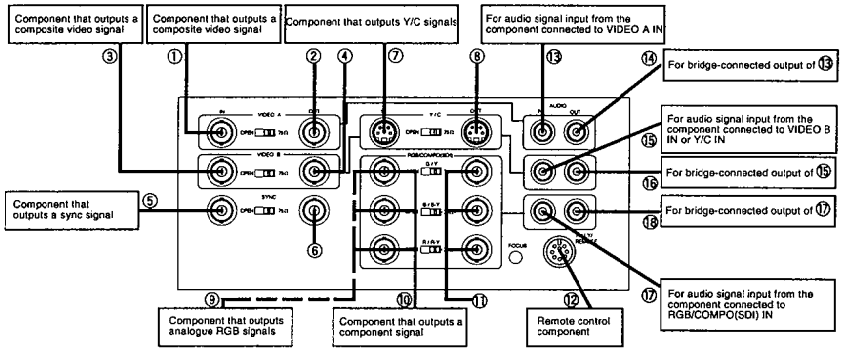
[15] FOCUS control
Adjustment hole exclusively for use by service personnel. Make sure to consult qualified service personnel for adjustment.

[16] TALLY/REMOTE terminal
External input terminal of a tally signal to make the tally lamp glow, or of a remote-control signal to switch input or picture control.

CONNECTION EXAMPLE

NOTE

- Be sure to turn off each component's power before connection.
- The connection shown below is only an example. Terminals and their functions differ in accordance with a component to be connected. Also read and follow the instructions for the component.



	Signal(s)	Terminal	Function
①	Composite video	VIDEO A IN	Input of a composite video signal
②	Composite video	VIDEO A OUT	Bridge-connected output of ①
③	Composite video	VIDEO B IN	Input of a composite video signal
④	Composite video	VIDEO B OUT	Bridge-connected output of ③
⑤	Composite sync	SYNC IN	Input of an external sync signal
⑥	Composite sync	SYNC OUT	Bridge-connected output of ⑤
⑦	Y/C	Y/C IN	Input of Y/C signals
⑧	Y/C	Y/C OUT	Bridge-connected output of ⑦
⑨	Analogue RGB	RGB/COMPO(SDI) IN	Input of analogue RGB signals
⑩	Component	RGB/COMPO(SDI) IN	Input of a component signal
⑪	Analog RGB or component	RGB/COMPO(SDI) OUT	Bridge-connected output of ⑨ or ⑩
⑫	Tally/remote control	TALLY/REMOTE	Input of a tally signal or remote control signal

External/internal synchronisation

Push the front panel EXT SYNC switch to ON, and the monitor operates to synchronise with an external sync signal input to the rear panel SYNC IN terminal.

Push the switch again to OFF, and the monitor operates to synchronise with a sync signal included in a video signal (if it includes a sync signal) input via a video input terminal.

RGB/COMPO(SDI) terminal setting

Set RGB or COMPO. on screen to match the type of video signal input to the rear panel RGB/COMPO(SDI) IN terminals.

To input analogue RGB signals, set to RGB.

To input Y, B-Y or R-Y signal, set to COMPO..

Operation:

1. Press the front panel MENU button to call up the MENU display on screen.
2. Press the ▲ or ▼ button to select RGB/COMPO(SDI).
3. Press the ◀ or ▶ button to set RGB or COMPO..

```
〈MENU〉
ASPECT RATIO   :4-3
FILTER SELECT  :COMB
PEAKING FREQ.  :2.6MHZ
PEAKING LEVEL  :0dB
AFC            :NORMAL
COLOR TEMP.    :6500
NTSC SETUP     :0
COMPO. LEVEL   :SMPTE
〈MEMORY MODE〉
▶RGB/COMPO(SDI) :RGB
ENTER          :
```

BASIC OPERATION

1. To turn the power on: Push the POWER switch.

The POWER indicator glows green. The mode and colour system of an input signal are automatically discerned and displayed on screen for about 3 seconds, To turn off power, push the POWER switch again, and the POWER indicator goes off.

```
VIDEO A ← Input mode
PAL     ← Colour system
```

2. To select the input: Push an INPUT SELECT switch.

Push VIDEO A, VIDEO B, RGB/COMPO(SDI) or Y/C. The mode and colour system of a selected input signal are automatically discerned and displayed on screen for about 3 seconds.

3. To adjust the audio level:

Turn the VOLUME control to the right to increase the level, or to the left to decrease the level.

●Relation between input mode indication and signal input/terminal

Input mode indication	Signal input/terminal
VIDEO A	Composite video signal input to VIDEO A IN
VIDEO B	Composite video signal input to VIDEO B IN
Y/C	Y/C signal input to Y/C IN
RGB	Analogue RGB signal input to RGB/COMPO(SDI) IN
COMPO(SDI)	Component signal input to RGB/COMPO(SDI) IN

●Colour system indication

Indication	Colour system	Colour sub-carrier frequency	Vertical scanning frequency
NTSC	NTSC	3.58 MHz	60 Hz
PAL	PAL	4.43 MHz	50 Hz
N4.43	NTSC	4.43 MHz	60 Hz
B/W	(Indicates when a black-and-white signal is input)		
NO SYNC	(Indicates when no signal is input)		

To demagnetise the picture tube

After positioning near the monitor a speaker (non-magnet-shielded) or other equipment that generates a strong magnetic field, or after relocating the monitor, colour patches could appear in the picture due to magnetisation of the picture tube. If this occurs, push the DEGAUSS switch to demagnetise the picture tube.

NOTE

- This function is not effective if activated a second time after a very short time has elapsed. When degaussing must be repeated, proceed after at least 10 minutes have passed since first degaussing.

BT-M2050T

PICTURE ADJUSTMENTS

Turn a separate front panel control to adjust picture contrast, picture brightness, picture colour density, and picture hue respectively:

CONTRAST (picture contrast)

Softer ⟵ CONTRAST ⟶ Clearer

BRIGHT (picture brightness)

Darker ⟵ BRIGHT ⟶ Brighter

CHROMA (picture colour density)

Thinner ⟵ CHROMA ⟶ Denser

PHASE (picture hue)

Purplish ⟵ PHASE ⟶ Greenish

NOTE

- To adjust the CHROMA and PHASE controls more precisely, input the colour bar signal and operate the BLUE CHECK function as follows:

  After inputting the colour bar signal, push the front panel BLUE CHECK switch to display a monochrome blue picture without red/green signal components. Turn the CHROMA and PHASE controls so that all (four, in the example below) blue bars have the same density and brightness.

Blue	Black	Blue	Black	Blue	Black	Blue

Relation between picture adjustments and input video signals

Each picture adjustment is effective for the following video signal input:

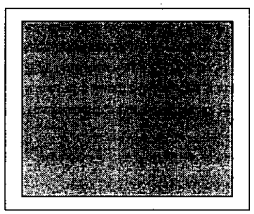
Signal / Control	Composite video, Y/C				RGB	COMPONENT
	NTSC	PAL	NTSC 4.43	B/W		
PHASE	Yes	No	Yes	No	No	No
CHROMA	Yes	Yes	Yes	No	No	Yes
BRIGHT	Yes	Yes	Yes	Yes	Yes	Yes
CONTRAST	Yes	Yes	Yes	Yes	Yes	Yes

VIDEO SIGNAL CONTROLS

Push each switch to ON or OFF for video signal control.

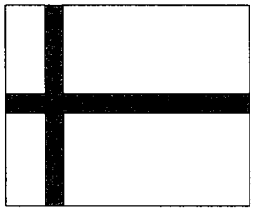
UNDER SCAN

Push the UNDER SCAN switch to reduce the dimensions of display area so the whole picture is displayed on screen. Use to check the picture frame.



PULSE CROSS

Push the PULSE CROSS switch to simultaneously display two blank areas crossed horizontally and vertically on screen ("Pulse Cross" display) by delaying the phase of the input signal. Use to check the vertical retrace line period, equalizing pulse period, vertical sync period, horizontal sync pulse, or burst signal.



NOTE

- This function is not effective for analogue RGB signal input.

COLOR OFF

Push the COLOR OFF switch to display a black-and-white picture by inputting a luminance signal only. Use to check the noise contained in a luminance signal or white balance.

NOTE

- This function is not effective for analogue RGB signal input.

BLUE CHECK

Push the BLUE CHECK switch to display a monochrome blue picture by eliminating red and green signal components. Use to check or adjust the CHROMA and/or PHASE controls.

ON-SCREEN MENU CONTROLS

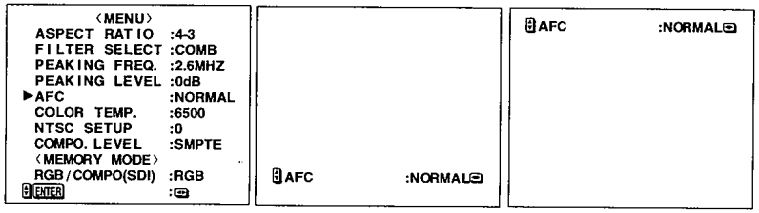
By calling up the menu display on screen, various functions can be selected and set as needed.

Calling up the menu display, selecting an item

1. Press the MENU button to call up the menu display on screen (see 1 below). (Press again to make the display disappear.)
2. Press the ▲ or ▼ button to select an item to be set. "▶" is indicated for the selected item.
3. Press the ◀ or ▶ button to change the setting.
4. After selecting another item by pressing the ▲ or ▼ button, repeat step 3. These settings are all kept in memory after power is turned off.
5. Press the MENU button to complete. The menu display disappears.

NOTE

- When the menu display 1 (shown at left below) is on screen, press the ENTER button. The display changes to 2 (shown below centre). In this state, you can also select the item or change the setting.
- When the display 2 is on screen, each time the ▼ button is pressed while the ENTER button pressed, the indication moves up or down on screen (the display 3). Press the MENU button with display 2 or 3 on screen, and the display is restored to 1.
- If no operation occurs for about 5 minutes after calling up the menu display on screen, the display disappears automatically.

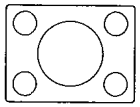


ASPECT RATIO (picture aspect ratio switching)

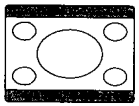
The aspect ratio of the picture can be switched between 4:3 and 16:9. When switching to "16-9" on screen, the height of the picture is slightly reduced (see right).

Setting	Function
4-3	Standard picture aspect ratio (4:3)
16-9	Displays the picture in 16:9 aspect ratio

- 4:3



- 16:9



FILTER SELECT (built-in filter selection)

When a composite video signal of the NTSC system (excluding NTSC 4.43) is input to the monitor, either or both of two filters in the monitor can be activated.

Setting	Function
COMB (comb filter)	Reduces colour noise in NTSC video signals for clearer pictures.
BOTH (both filters)	Both comb and trap filters function at the same time.
NOTCH (Trap filter)	Eliminates dot interference that would show up in the vertical boundary between two different colours.

NOTE

- The function can be operated and the indication appears only when a composite video signal of the NTSC system (excluding NTSC 4.43) is input to the monitor.

ON-SCREEN MENU CONTROLS (continued)

PEAKING FREQ./PEAKING LEVEL (picture quality improvement)

Corrects the luminance signal to improve picture quality by changing peak frequency and/or peak level depending on the video signal input to the monitor. Use PEAKING FREQ. to set correction frequency. Use PEAKING LEVEL to set correction level.

Setting (frequency)	Function
2.6 MHz	For composite video signal or Y/C signal.
5.0 MHz	For component video signal.

Setting (level)	Function
0 dB to +9 dBs	Set a higher level for correction to a higher degree.

NOTE

- When analogue RGB signals are input to the monitor, the indications do not appear and the functions cannot be operated.

AFC (switching of time constant for the AFC)

Use to set the time constant for the AFC (auto fine-frequency control) to correct skew distortion of video signals input via a videotape recorder or other video equipment.

Setting	Function
NORMAL	Normal-speed correction.
FAST	Faster correction.
SLOW	Slower correction.

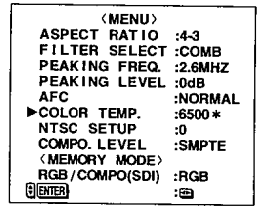
NOTE

- By changing the default setting of white balance adjustment under the SET-UP MENU display (see page 15 for adjustment), the * indication is added to the right of the setting to indicate that the factory-preset setting was changed.

COLOR TEMP. (colour temperature switching)

Use to set the colour temperature of white balance.

Setting	Function
9300	To 9300K.
6500	To 6500K.



NTSC SETUP (NTSC set-up level)

Use to set up the luminance signal level to match the configuration of the video signal input to the monitor.

Setting	Function
0	For video signal with 0% luminance signal
7.5	For video signal with 7.5% luminance signal

NOTE

- The item and setting are indicated on screen and the function can be operated only when a video signal of the NTSC system is input to the monitor.

COMPO. LEVEL (chrominance level setting)

Use to set the chrominance level of a component video signal.

Setting	Function
SMPTE	For component video signal input via an MII videotape recorder.
BETA00	For component video signal input (set-up level: 0%) via a BETACAM videotape recorder.
BETA75	For component video signal input (set-up level: 7.5%) via a BETACAM videotape recorder.

NOTE

- The item and setting are indicated on screen and the function can be operated only when a component video signal is input to the monitor.

MEMORY MODE

A set of picture settings can be programmed in memory for quick recall when necessary.

Recall/release of memory mode

Press the MEMORY MODE switch to recall a set of picture settings programmed in memory.

Pressing the switch locks the functions of the front-panel PHASE, CHROMA, BRIGHT, CONTRAST controls, and remote-control picture adjustments not to be operated.

Press again to release memory mode.

NOTE

- If you attempt to operate a locked function, "MEMORY MODE ON!!" appears on screen for approx. 2 seconds to indicate the function cannot be operated.

Setting programming of the picture being monitored

The settings of the picture being monitored can be programmed in memory.

Settings programmable in memory mode:

- Settings of the CONTRAST, BRIGHT, CHROMA and PHASE controls on the front panel
- On-screen menu function settings (except RGB/COMPO(SDI))
- Remote-control picture adjustment settings

1. Check the MEMORY MODE switch is off.
2. Press the MENU button.
3. Press the ▲ or ▼ button to select MEMORY MODE. Then press the ENTER button.
4. ● Press the ENTER button to programme.
   ● Press the ◀ or ▶ button to cancel.

NOTE

- Programmed picture settings are kept in memory after the power is turned off.

```
〈MEMORY MODE〉

Are you sure ?

"Yes" then [ENTER]
"No"  then [◀] or [▶]
```

NOTE

- No matter what video signal is input, all items appear on screen. However, depending on the type of input video signal, some functions might not operate even if their settings are made.

Revision of memory mode

Programmed picture settings can be revised if necessary.

1. Press the MEMORY MODE switch to activate memory mode.
2. Press the MENU button to call up display [1] on screen.

```
〈MEMORY MODE REVISE〉
►PICTURE ADJUSTMENT
 ASPECT RATIO    :4:3
 FILTER SELECT   :COMB
 PEAKING FREQ.   :2.6MHZ
 PEAKING LEVEL   :0dB
 AFC             :NORMAL
 COLOR TEMP.     :6500
 NTSC SETUP      :0
 COMPO. LEVEL    :SMPTE
[ENTER]          :↵
```

[1]

MEMORY MODE (continued)

3. Press the ▲ or ▼ button to select a function to be revised.

   Press the ENTER button after selecting PICTURE ADJUSTMENT to call up display [2].

   After making all settings on screen, press the MENU button to make display [1] appear.

4. Press the ◀ or ▶ button to change the set level.

   Adjustable CONTRAST, BRIGHT, CHROMA or PHASE range depends on each set level previously stored in memory. MAX appears to indicate maximum level that cannot be increased. MIN appears to indicate minimum level that cannot be decreased.

```
〈MEMORY MODE REVISE〉
►CONTRAST       :0
 BRIGHT         :0
 CHROMA         :0
 PHASE          :0
[ENTER]         :↵
```

[2]

●Variable setting range

Function		Variable setting range	Default set level
PICTURE ADJUST-MENT	CONTRAST	-20 to +20	0
	BRIGHT	-20 to +20	0
	CHROMA	-20 to +20	0
	PHASE	-20 to +20	0
ASPECT RATIO		4:3 16:9	4:3
FILTER SELECT		COMB BOTH NOTCH	COMB
PEAKING FREQ.		2.6MHz 5.0MHz	2.6MHz
PEAKING LEVEL		0dB + 1dB ··· +9dB	0dB
AFC		NORMAL FAST SLOW	NORMAL
COLOR TEMP.		9300 6500	6500
NTSC SETUP		0 7.5	0
COMPO. LEVEL		SMPTE BETA00 BETA75	SMPTE

NOTE

- If the ENTER button is pressed after a function other than PICTURE ADJUSTMENT is selected, the on-screen display changes into a single-line one. To select another function after making a change in function, press the MENU button to restore display [1].

5. With display [1] on screen, press the MENU button to make display [3] appear.
   ●Press the ENTER button to programme.
   ●Press the ◀ or ▶ button to cancel.

```
〈MEMORY MODE REVISE〉

Are you sure ?

"Yes" then [ENTER]
"No"  then [◀] or [▶]
```

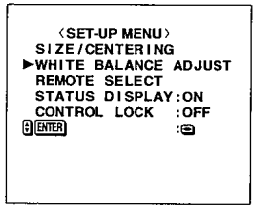
[3]

SET-UP FOR MONITOR INSTALLATION

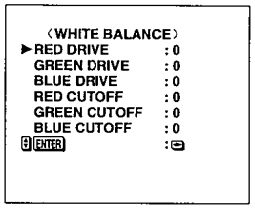
When installing the monitor, make set-up adjustments required for the picture settings to match conditions where the monitor is to be used.

To call up SET-UP MENU and select a function:

1. To make 1 (SET-UP MENU) appear, with the ENTER button pressed, press the MENU button.
2. Press the ▲ or ▼ button to select an adjustment item.
   (To set STATUS DISPLAY or CONTROL LOCK, steps **3** and **4** are not necessary.)
3. Press the ENTER button to call up the adjustment menu 2 of a selected item (e.g. WHITE BALANCE).
4. Press the ▲ or ▼ button to select a function to be adjusted.
5. Press the ◀ or ▶ button to change the setting.
6. With the display 1 on screen, press the ▲ or ▼ button to select another function and repeat step **5**.
7. Press the MENU button to complete. SET-UP MENU disappears.
   - To make 1 (SET-UP MENU) disappear:
     Press the MENU button.
   - To make 2 (e.g. WHITE BALANCE) disappear:
     Press the MENU button twice.



1



2

NOTE

- Each time the MENU button is pressed, the previous menu is restored.

SIZE/CENTERING (size/positioning adjustments of RGB signal pictures)

For analogue RGB video signal pictures, horizontal size, vertical size, horizontal positioning and vertical positioning can be finely adjusted.

Adjustment (level)	Function
H. POSITION (-10, -9 ... 0 ... +9, +10)	+ moves the picture to right. - moves the picture to left.
V. POSITION (-10, -9 ... 0 ... +9, +10)	+ moves the picture down. - moves the picture up.
H. SIZE (-10, -9 ... 0 ... +9, +10)	+ makes the picture wider. - makes the picture narrower.
V. SIZE (-10, -9 ... 0 ... +9, +10)	+ makes the picture higher. - makes the picture lower.

NOTE

- SIZE/CENTERING appears and the function is operable only when monitoring the picture of analogue RGB video signals.

SET-UP FOR MONITOR INSTALLATION (continued)

WHITE BALANCE ADJUST (white balance adjustments)

Before making these adjustments, select the colour temperature 9300K or 6500K on MENU.

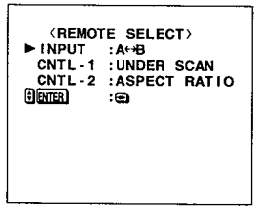
Adjustment (level)	Function
RED DRIVE (-10, -9, ... 0 ... +9, +10)	Adjusts the drive level of a red signal component.
GREEN DRIVE (-10, -9, ... 0 ... +9, +10)	Adjusts the drive level of a green signal component.
BLUE DRIVE (-10, -9, ... 0 ... +9, +10)	Adjusts the drive level of a blue signal component.
RED CUTOFF (-10, -9, ... 0 ... +9, +10)	Sets the cut-off voltage of a red signal component.
GREEN CUTOFF (-10, -9, ... 0 ... +9, +10)	Sets the cut-off voltage of a green signal component.
BLUE CUTOFF (-10, -9, ... 0 ... +9, +10)	Sets the cut-off voltage of a blue signal component.

NOTE

- By making white balance adjustments on SET-UP MENU, ✻appears to the right of the COLOR TEMP. setting on MENU

REMOTE SELECT (TALLY/REMOTE-terminal settings)

Via the TALLY/REMOTE terminal, the tally lamp can be turned on/off, or a function (selected from display 3 shown on the right) can be operated using an external control.



3

INPUT setting indications and selected inputs

✻: indicates when deactivating the remote control via the TALLY/REMOTE terminal

Setting indication	NOT USE	A↔B	A↔Y/C	A↔RGB	A↔COMPO	B↔Y/C	B↔RGB	B↔COMPO	Y/C↔RGB	Y/C↔COMPO	RGB↔COMPO
Short-circuit	✻	A	A	A	A	B	B	B	Y/C	Y/C	RGB
Open-circuit	✻	B	Y/C	RGB	COMPO.	Y/C	RGB	COMPO.	RGB	COMPO.	COMPO.

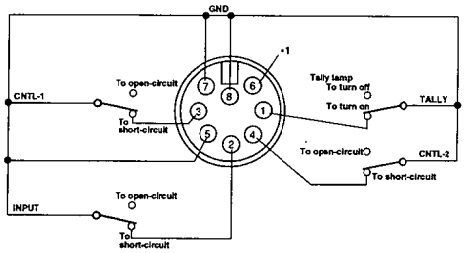
CNTL-1/CNTL-2 setting indications and set positions

✻: indicates when deactivating the remote control via the TALLY/REMOTE terminal

Setting indication	NOT USE	UNDER SCAN	PULSE CROSS	COLOR OFF	BLUE CHECK	EXTERNAL SYNC	ASPECT RATIO	COLOR TEMP.	AUDIO MUTE
Short-circuit	✻	ON	ON	ON	ON	External	16-9	6500	ON
Open-circuit	✻	OFF	OFF	OFF	OFF	Internal	4-3	9300	OFF

●TALLY/REMOTE terminal functions

All controls via TALLY/REMOTE terminal are made by short-circuiting or open-circuiting any pin from Pin 1 to 4 and either Pin 7 or 8 (GND each) of this terminal. When using this terminal, be sure to short-circuit Pin 5 and either Pin 7 or 8.



NOTE

- When the TALLY/REMOTE terminal is used, the following functions become deactivated (except when they are set to "NOT USE"):
  - Front INPUT SELECT and EXTSYNC switches.
  - Front UNDER SCAN, PULSE CROSS, COLOR OFF and BLUE CHECK switches.
  - On-screen MENU's ASPECT RATIO and COLOR TEMP. functions.
- If a function is applied to both CNTL-1 and CNTL-2, CNTL-1 has priority.

*1: Pin 6 is DC power output pin. It outputs DC 5 V when the monitor's power is on. (Do not short-circuit pin 6 directly to ground.)

SET-UP FOR MONITOR INSTALLATION (continued)

STATUS DISPLAY (setting the status display to on/off)

When the power is turned on or the input mode is switched, the status display (colour system and input mode) appears on screen. The display can be set to on or off.

Setting	Function
ON	Status display appears.
OFF	Status display does not appear.

CONTROL LOCK (deactivation of front-control functions)

Set CONTROL LOCK to ON on screen to deactivate the front-control functions (front VOLUME control and remote volume control are operable).

Setting	Function
ON	Deactivates the front controls (except front/remote volume controls).
OFF	Releases deactivated functions.

NOTE

- If you attempt to operate a locked function, "CONTROL LOCK ON!!" appears on screen for approx. 2 seconds to indicate the function cannot be operated.
- Once CONTROL LOCK is deactivated, the current settings of the front-control knobs and buttons are activated.
- If the power is turned off with CONTROL LOCK activated, the function is kept in memory.

PICTURE SETTING INITIALISATION

MENU and/or SET-UP MENU settings including added changes can be reset (initialised) to their factory-preset conditions.

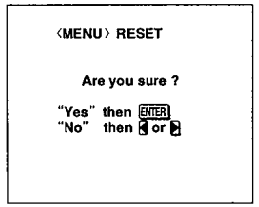
To initialise MENU settings only

MENU settings (except MEMORY MODE and RGB/COMPO(SDI)) can be exclusively reset:

1. With the ▼ button pressed, press the MENU button to display [1] on screen.
2. ● Press the ENTER button to reset.
   ● Press the ◀ or ▶ button to cancel.

NOTE

- For factory-presets on the MENU "MENU DISPLAY CHART".



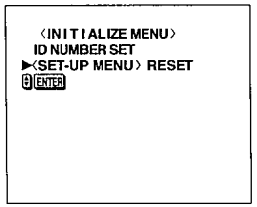
[1]

To initialise both MENU/SET-UP MENU settings

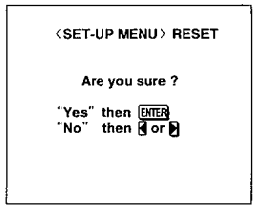
MENU and SET-UP MENU settings other than MEMORY MODE and RGB/COMPO(SDI) can be reset at the same time.

1. Press the POWER switch to turn the power off.
2. With the ▼ and MENU buttons pressed, press the POWER switch to turn the power on. Keep pressing the ▼ and MENU buttons until [2] appears on screen.
3. Press the ▲ or ▼ button to select SET-UP MENU RESET. Then press the ENTER button to display [3] on screen.
4. ● Press the ENTER button again to execute.
   ● Press the ◀ or ▶ button to cancel.

※ The function of "ID NOMBER SET" can't use.



[2]



[3]

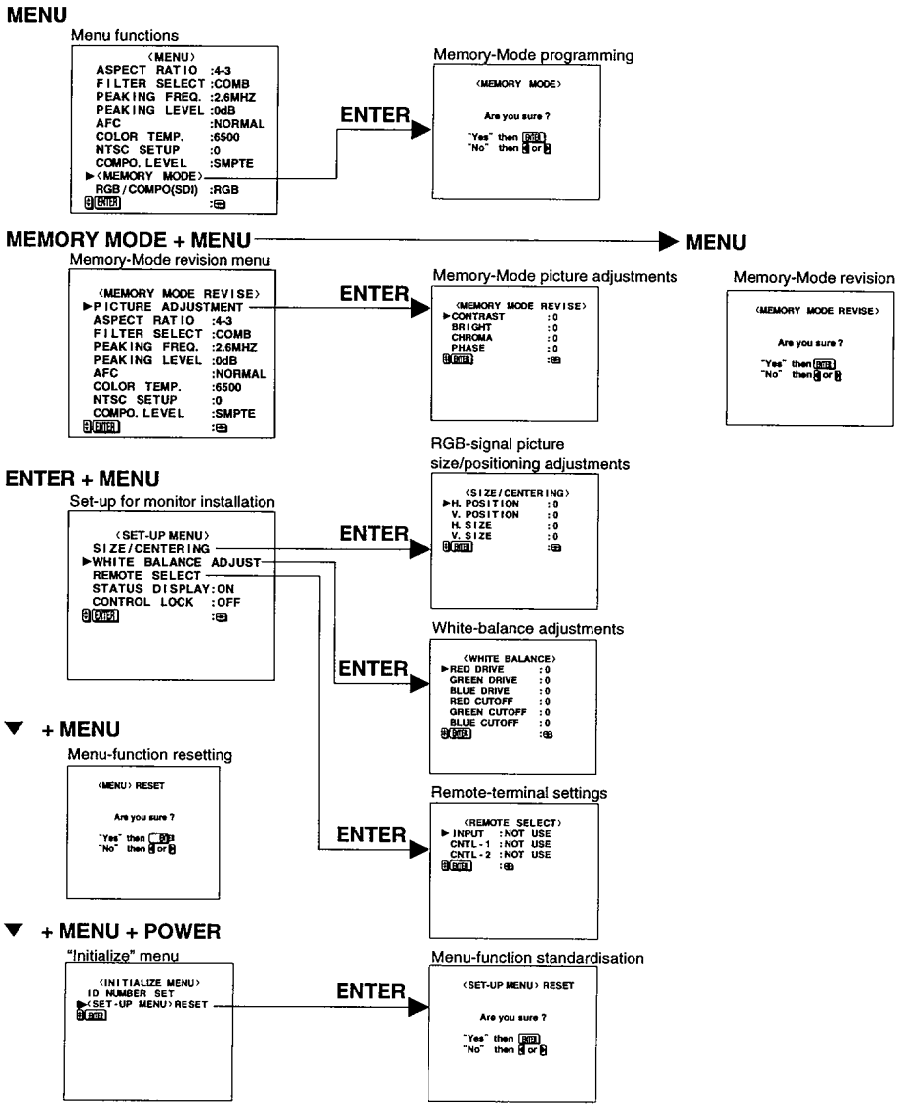
BEFORE CALLING FOR SERVICE

Before concluding a problem has occurred, check the following points. If the problem persists after carrying out the checks, disconnect the power cord from the AC outlet and consult the dealer from whom you purchased the monitor.

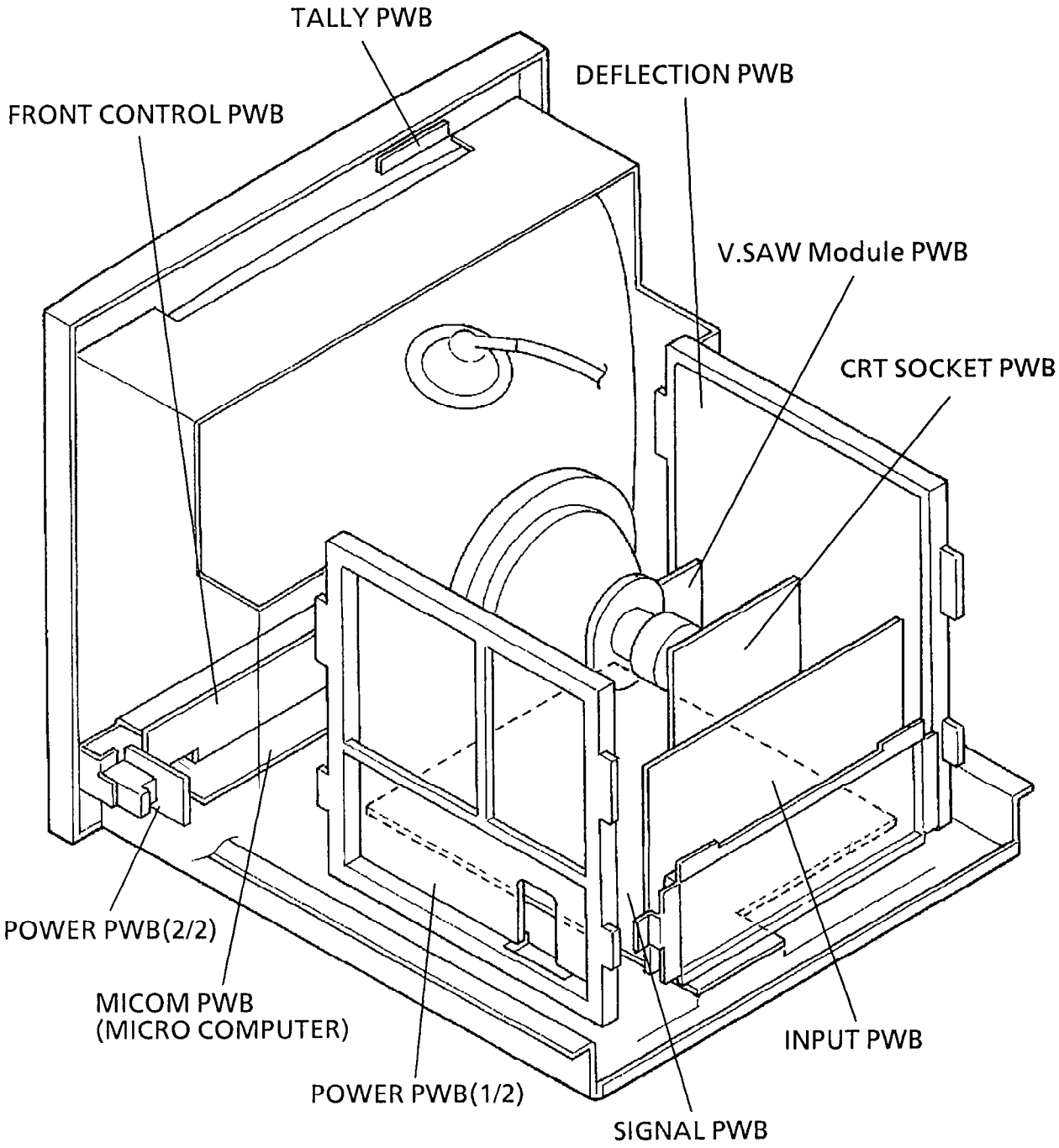
Problems	Points to be checked	Measures
Inoperable adjustment controls or buttons.	Is MEMORY MODE switched on?	Switch off.
	Is CONTROL LOCK activated?	Deactivate it.
Abnormal picture adjustments with all controls at centre.	Are PICTURE ADJUSTMENT of MEMORY MODE REVISE menu setting changed?	Reset to standard settings.
Inoperable picture synchronisation.	Is EXT SYNC switched on?	Switch to off.
No sound via audio signal input.	Does the audio input terminal match the video input terminal?	Each audio input terminal is linked with a video input terminal.
No INITIALIZE MENU display.	Are you pressing the ▼ and MENU buttons until it appears?	Keep pressing these buttons until it appears.
Inoperable CNTL-2 external control via TALLY/REMOTE terminal.	Is a function applied common to CNTL-1 and CNTL-2?	Set other functions to CNTL-2.

MENU DISPLAY CHART

Adjustments or settings preset at the factory are shown in the menus.

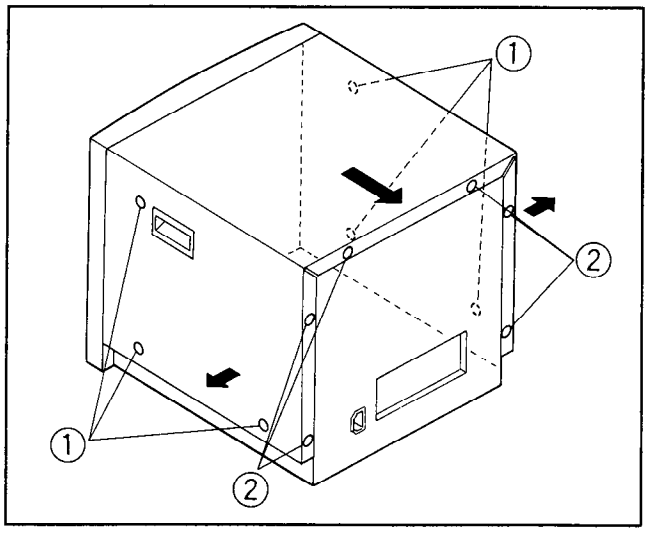


MAIN PARTS LOCATION



SPECIFIC SERVICE INSTRUCTIONS

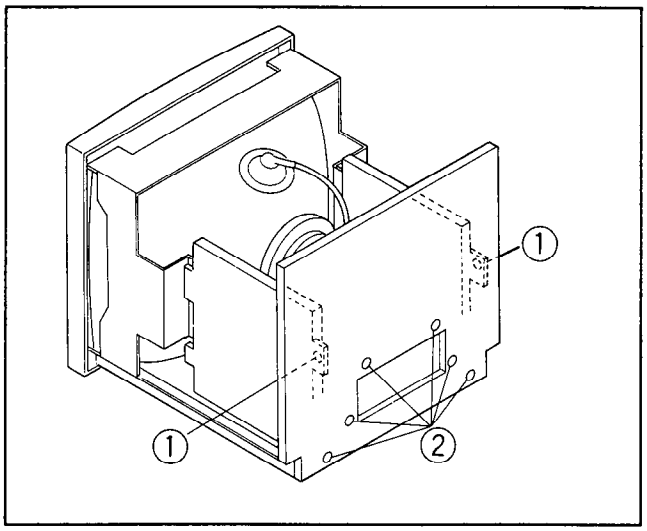
Disassembly



- Be sure to disconnect the power cord from the AC outlet before disassembly and reassembly. Use care since unless the power cord is disconnected, some parts may still be live even when the power switch is off.

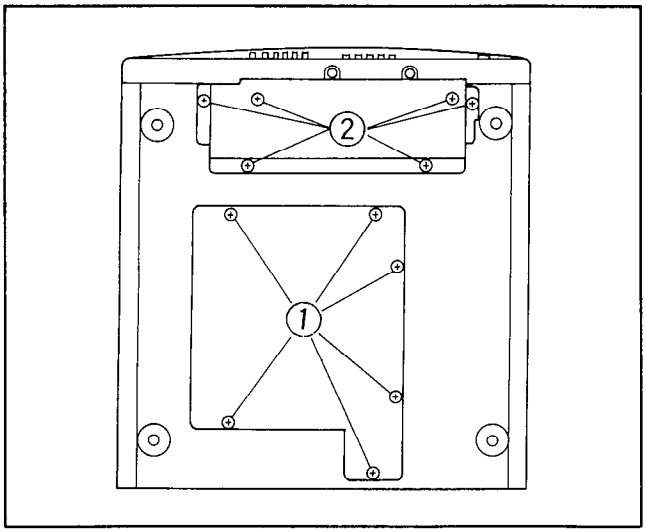
■ Top cover

1. Take out 6 screws ① and 6 screws ②.
2. Slightly spread the bottom part of the cover, shift it rearward and raise the top cover to remove it.



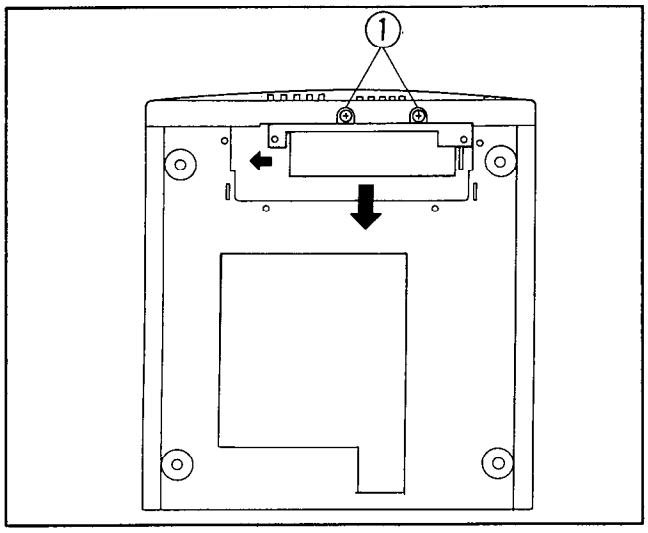
■ Rear panel

1. Remove the top cover.
2. Take out 2 screws ① and 6 screws ② to remove the rear panel.



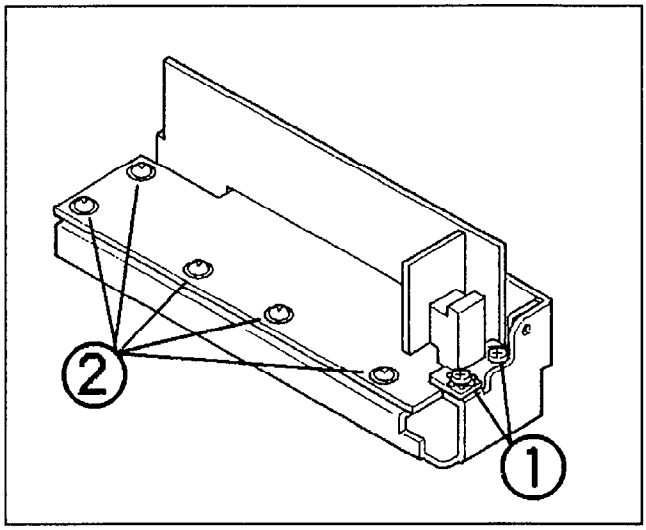
■ Bottom shield and shield cover

1. Remove the top cover and rear panel.
2. Take out 6 screws ① and remove the bottom shield.
3. Take out 6 screws ② and remove the shield cover.



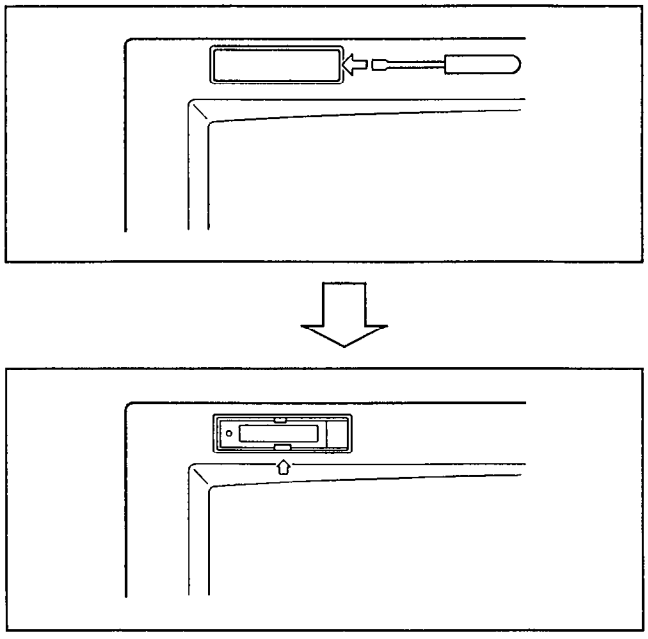
■ Front control brackets

1. Remove the shield cover.
2. Take out 2 screws ①.
3. Slide each bracket slightly toward the left, then pull downward to remove.



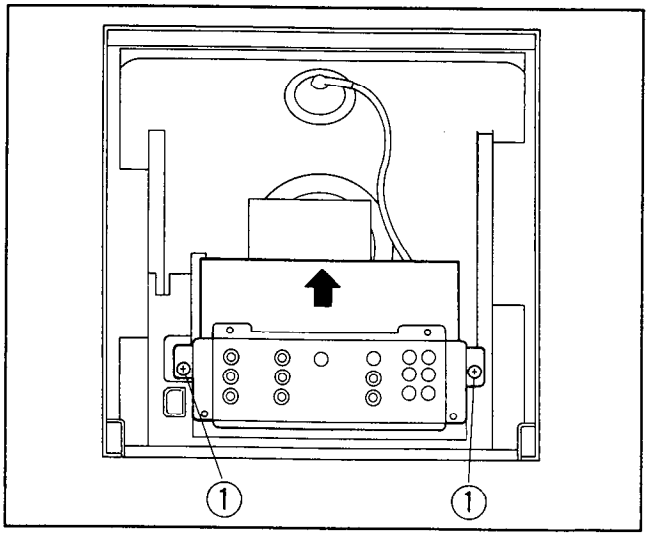
■ Power switch, front control PWB, CPU PWB

1. Remove the front control brackets (including CPU PWB).
2. Take out 2 screws ① and remove the power switch.
3. Take out 5 screws ② and remove the front control and CPU PWBs.
4. Disengage the connectors of the two PWBs.



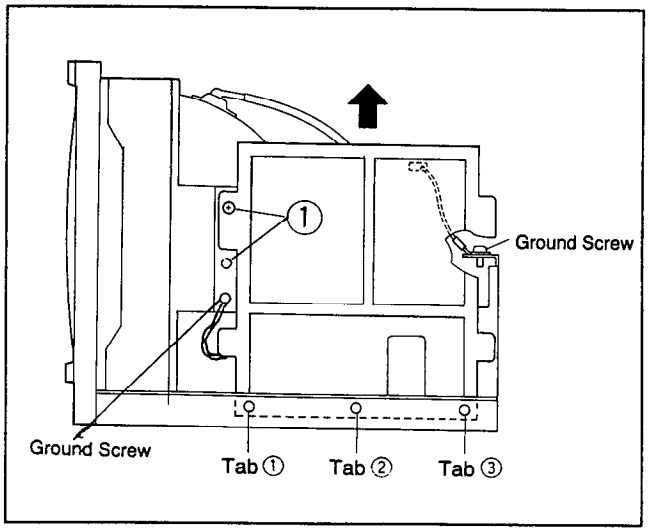
■ Tally PWB

1. While using care not to scratch the front panel, insert a flat blade screwdriver into the edge of the tally cover and remove the cover.
2. Since the tally PWB appears, press the top and bottom tabs downward with the screwdriver.
3. Pull the PWB downward to tilt and remove the PWB.



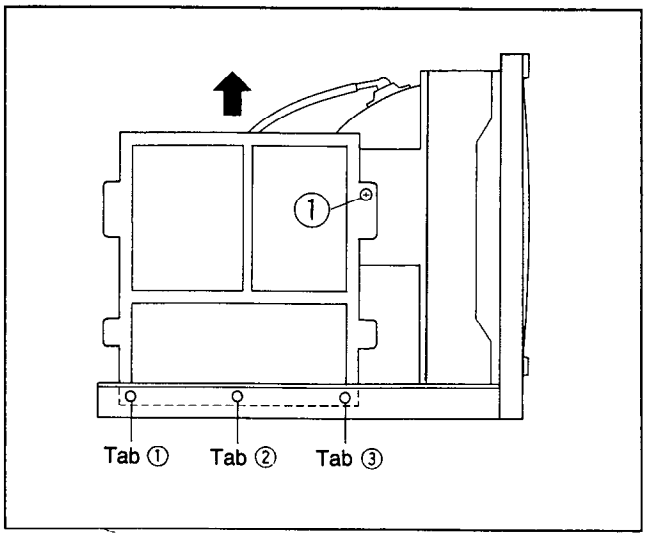
■ Input PWB

1. Remove the top cover and rear panel.
2. Take out 2 screws ①.
3. While pressing the lower signal PWB, pull upward and remove the input PWB. Use care regarding the tabs and engage the PWB to enable powered checks.



■ Power supply PWB

1. Remove the top cover and rear panel.
2. Take out 2 screw ①.
3. While raising the PWB, insert a screwdriver or similar tool to disengage tabs 1, 2 and 3, then remove the PWB.



■ Deflection PWB

1. Remove the top cover and rear panel.
2. Take out 1 screw ①.
3. While raising the PWB, insert a screwdriver or similar tool to disengage tabs 1, 2 and 3, then remove the PWB.

REPLACEMENT OF CHIP COMPONENT

■CAUTIONS

1. Avoid heating for more than 3 seconds.
2. Do not rub the electrodes and the resist parts of the pattern.
3. When removing a chip part, melt the solder adequately.
4. Do not reuse a chip part after removing it.

■SOLDERING IRON

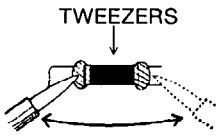
1. Use a high insulation soldering iron with a thin pointed end of it.
2. A 30w soldering iron is recommended for easily removing parts.

■REPLACEMENT STEPS

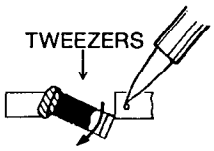
1. How to remove Chip parts

●Resistors, capacitors, etc

(1) As shown in the figure, push the part with tweezers and alternately melt the solder at each end.

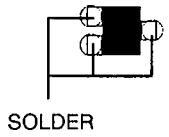


(2) Shift with tweezers and remove the chip part.

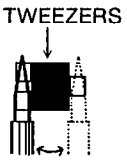


●Transistors, diodes, variable resistors, etc

(1) Apply extra solder to each lead.



(2) As shown in the figure, push the part with tweezers and alternately melt the solder at each lead. Shift and remove the chip part.

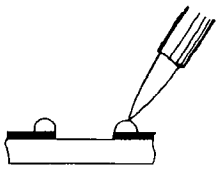


Note: After removing the part, remove remaining solder from the pattern.

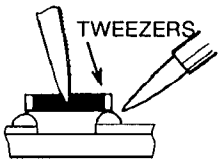
2. How to install Chip parts

●Resistors, capacitors, etc

(1) Apply solder to the pattern as indicated in the figure.



(2) Grasp the chip part with tweezers and place it on the solder. Then heat and melt the solder at both ends of the chip part.

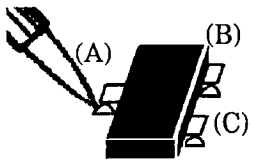


●Transistors, diodes, variable resistors, etc

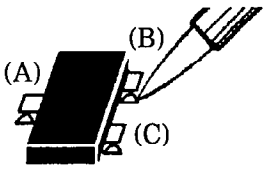
(1) Apply solder to the pattern as indicated in the figure.

(2) Grasp the chip part with tweezers and place it on the solder.

(3) First solder lead A as indicated in the figure.



(4) Then solder leads B and C.



Service menu entry

1. While holding Enter depressed, press Degauss.
2. The letter S appears at the upper left of the screen.
3. While holding Enter depressed, press Menu.
4. The screen display changes to <SERVICE MENU> PLEASE, DON'T TOUCH!
5. Press the left [←] or right arrow [→] to display the service menu.
   If Step 4 state continues for more than 5 seconds without a further operation, the display extinguishes and the mode is released.

Item selection

- While the service main menu is displayed:

1. Press the up [↑] or down arrow [↓] to select the item.
2. After selecting the item, press Enter.
3. The adjustment mode menu is displayed.

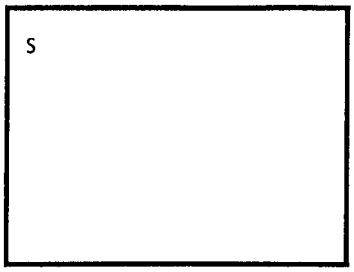
Setting value change

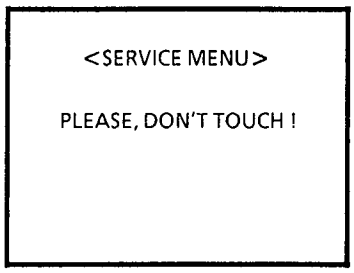
- While the adjustment mode menu is displayed:

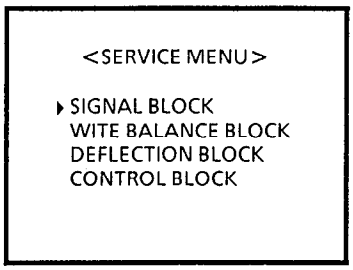
1. Press the right arrow [→] to change the setting value in the + direction.
2. Press the left arrow [←] to change the setting value in the - direction.
3. Press the up [↑] or down arrow [↓] to change the adjustment item number.

Service menu exit

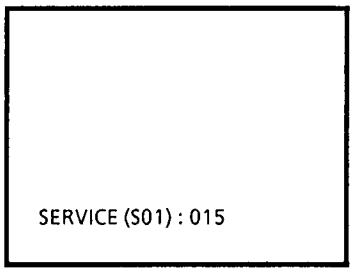
1. When settings are completed, press Menu.
2. The service main menu returns.
3. Again press Menu.
4. The screen display extinguishes and the service mode is exited.



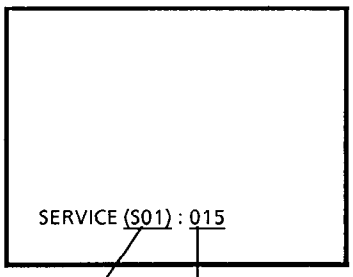




Service main menu



Adjustment mode menu



■ Signal system settings

No.	Input	Signal	Item	Data type	Variable range	Initial value
S01			Bright	Standard value	0~63	15
S02	Video	NTSC	Chroma	Standard value	0~63	32
S03	Video	NTSC	Phase	Standard value	0~63	32
S04	Video	NTSC	Contrast	Standard value	0~63	32
S05	Video	PAL	Chroma	Standard value	0~63	32
S06	Video	PAL N443	Contrast	Standard value	0~63	32
S07	Video Y/C	N443	Phase	Standard value	0~63	32
S08	Y/C	NTSC	Chroma	Standard value	0~63	32
S09	Y/C	NTSC	Phase	Standard value	0~63	32
S10	Y/C	NTSC PAL N443	Contrast	Standard value	0~63	32
S11	Y/C	PAL	Chroma	Standard value	0~63	32
S12	Color difference	N10/ SMPTE	Chroma	Standard value	0~63	32
S13	Color difference		Contrast	Standard value	0~63	32
S14	RGB		Contrast	Standard value	0~63	32
S15	Video	N443	Chroma	Correction value	0~255	3
S16	Y/C	N443	Chroma	Correction value	0~255	3
S17	Color difference	BETA	Chroma	Correction value	0~255	247
S18			Bright →pulse cross	Correction value	0~255	20
S19			Contrast →pulse cross	Correction value	0~255	236
S20			Bright →underscan	Correction value	0~255	0
S21			Contrast →underscan	Correction value	0~255	252
S22			Bright →16 : 9	Correction value	0~255	0
S23			Contrast →16 : 9	Correction value	0~255	250
S24	Video	SECAM	Chroma	Standard value	0~63	32
S25	Video	SECAM	Contrast	Standard value	0~63	32
S26	Y/C	SECAM	Chroma	Standard value	0~63	32

No.	Input	Signal	Item	Data type	Variable range	Initial value
S27	Y/C	SECAM	Contrast	Standard value	0~63	32
S28			Peak Drive Limit	Fixed value	0~255	50
S29			Control Reg - 1	Fixed value	0~255	193
S30			Control Reg - 2	Fixed value	0~255	0
S31	Video	NTSC,B/W 60	Y Delay	Fixed value	0~255	65
S32	Y/C	NTSC,B/W 60	Y Delay	Fixed value	0~255	73
S33	Video	PAL,B/W 50	Y Delay	Fixed value	0~255	82
S34	Y/C	PAL,B/W 50	Y Delay	Fixed value	0~255	82
S35	Video	N443	Y Delay	Fixed value	0~255	82
S36	Y/C	N443	Y Delay	Fixed value	0~255	82
S37	Video	SECAM	Y Delay	Fixed value	0~255	82
S38	Y/C	SECAM	Y Delay	Fixed value	0~255	82
S39	Color difference		Y Delay	Fixed value	0~255	64

■ White balance settings

No.	Color temperature	Scan	Item	Data type	Variable range	Initial value
W01	9300	Normal	R - Cutoff	Standard value	0~63	37
W02	9300	Normal	G - Cutoff	Standard value	0~63	25
W03	9300	Normal	B - Cutoff	Standard value	0~63	23
W04	9300	Normal	R - Drive	Standard value	0~63	34
W05	9300	Normal	G - Drive	Standard value	0~63	32
W06	9300	Normal	B - Drive	Standard value	0~63	30
W07	6500	Normal	R - Cutoff	Standard value	0~63	48
W08	6500	Normal	G - Cutoff	Standard value	0~63	25
W09	6500	Normal	B - Cutoff	Standard value	0~63	12
W10	6500	Normal	R - Drive	Standard value	0~63	37
W11	6500	Normal	G - Drive	Standard value	0~63	32
W12	6500	Normal	B - Drive	Standard value	0~63	24

No.	Color temperature	Scan	Item	Data type	Variable range	Initial value
W13	3200	Normal	R - Cutoff	Standard value	0～63	Not used(32)
W14	3200	Normal	G - Cutoff	Standard value	0～63	Not used(32)
W15	3200	Normal	B - Cutoff	Standard value	0～63	Not used(32)
W16	3200	Normal	R - Drive	Standard value	0～63	Not used(32)
W17	3200	Normal	G - Drive	Standard value	0～63	Not used(32)
W18	3200	Normal	B - Drive	Standard value	0～63	Not used(32)
W19		Under	R - Cutoff	Correction value	0～255	0
W20		Under	G - Cutoff	Correction value	0～255	0
W21		Under	B - Cutoff	Correction value	0～255	0
W22		Under	R - Drive	Correction value	0～255	0
W23		Under	G - Drive	Correction value	0～255	0
W24		Under	B - Drive	Correction value	0～255	0
W25		16 : 9	R - Cutoff	Correction value	0～255	0
W26		16 : 9	G - Cutoff	Correction value	0～255	0
W27		16 : 9	B - Cutoff	Correction value	0～255	0
W28		16 : 9	R - Drive	Correction value	0～255	0
W29		16 : 9	G - Drive	Correction value	0～255	0
W30		16 : 9	B - Drive	Correction value	0～255	0

■ Deflection system settings

No.	Scan	Input	V. frequency	Item		Variable range	Initial value
D01	Normal	Video	60Hz	V-Size	→Standard value	0~63	38
D02	Normal	Video	60Hz	V-Shift	→Standard value	0~63	32
D03	Normal	Video	60Hz	V-Linearity	→Standard value	0~15	7
D04	Normal	Video	60Hz	S-Correction	→Standard value	0~15	15
D05	Normal	Video	60Hz	H-Size	→Standard value	0~63	32
D06	Normal	Video	60Hz	H-Shift	→Standard value	0~63	32
D07	Normal	Video	60Hz	Pin-AMP	→Standard value	0~63	30
D08	Normal	Video	50Hz/60Hz	HV-COMP-V	→Standard value	0~7	7
D09	Normal	Video	50Hz/60Hz	HV-COMP-H	→Standard value	0~7	0
D10	Normal	Video	50Hz	V-Size	→Standard value	0~255	40
D11	Normal	Video	50Hz	V-Shift	→Standard value	0~255	29
D12	Normal	Video	50Hz	V-Linearity	→Standard value	0~255	8
D13	Normal	Video	50Hz	S-Correction	→Standard value	0~255	15
D14	Normal	Video	50Hz	H-Size	→Standard value	0~255	33
D15	Normal	Video	50Hz	H-Shift	→Standard value	0~255	32
D16	Normal	Video	50Hz	Pin-AMP	→Standard value	0~255	30
D17	Under	Video	50Hz/60Hz	V-Size	→Correction value	0~255	230
D18	Under	Video	50Hz/60Hz	V-Shift	→Correction value	0~255	0
D19	Under	Video	50Hz/60Hz	V-Linearity	→Correction value	0~255	0
D20	Under	Video	50Hz/60Hz	S-Correction	→Correction value	0~255	0
D21	Under	Video	50Hz/60Hz	H-Size	→Correction value	0~255	0
D22	Under	Video	50Hz/60Hz	H-Shift	→Correction value	0~255	253
D23	Under	Video	50Hz/60Hz	Pin-AMP	→Correction value	0~255	2
D24	Under	Video	50Hz/60Hz	HV-COMP-V	→Correction value	0~255	0
D25	Under	Video	50Hz/60Hz	HV-COMP-H	→Correction value	0~255	0
D26	16 : 9	Video	50Hz/60Hz	V-Size	→Correction value	0~255	0
D27	16 : 9	Video	50Hz/60Hz	V-Shift	→Correction value	0~255	0
D28	16 : 9	Video	50Hz/60Hz	V-Linearity	→Correction value	0~255	0
D29	16 : 9	Video	50Hz/60Hz	S-Correction	→Correction value	0~255	0
D30	16 : 9	Video	50Hz/60Hz	H-Size	→Correction value	0~255	0

No.	Scan	Input	V. frequency	Item	Variable range	Initial value
D31	16 : 9	Video	50Hz/60Hz	H-Shift →Correction value	0~255	0
D32	16 : 9	Video	50Hz/60Hz	Pin-AMP →Correction value	0~255	0
D33		RGB	60Hz	V-Shift →Correction value	0~255	0
D34		RGB	60Hz	H-Shift →Correction value	0~255	0
D35		RGB	50Hz	V-Shift →Correction value	0~255	0
D36		RGB	50Hz	H-Shift →Correction value	0~255	0
D37	Pulse Cross		50Hz/60Hz	V-Shift →Correction value	0~255	0
D38	Pulse Cross		50Hz/60Hz	H-Shift →Correction value	0~255	0
D39	External SYNC		50Hz/60Hz	V-Shift →Correction value	0~255	0
D40	External SYNC		50Hz/60Hz	H-Shift →Correction value	0~255	0
D41	TILT		50Hz/60Hz	TILT →Fixed value	0~255	16
D42	U/L Cornner Pin		50Hz/60Hz	U/L CORNER PIN →Fixed value	0~255	255
D43	V-BOW/V-ANGLE		50Hz/60Hz	V-BOW/V-ANGLE →Fixed value	0~255	136

■ **Control system setting**

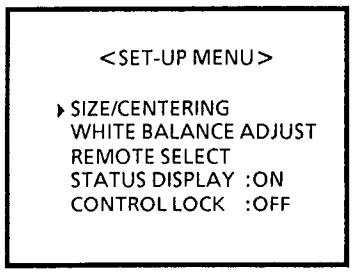
No.	Item	Variable range	Initial value	Remarks
C01	Color TEMP. Default	0~255	1	Color temperature initial setting 1:6500K,2:9300K
C02	Menu display time	0~255	0	Menu display time 0: extinguish after 5 minutes, 1: continuous
C03	OSDC Color	0~255	7	On-screen color setting, power off/on needed after changing (see table next page)
C04	OSDC H.Position	0~255	5	On-screen H. position 0 - 15
C05	OSDC V.Position (60Hz)	0~255	1	On-screen V. position (60 Hz) 0 - 15
C06	OSDC V.Position (50Hz)	0~255	2	On-screen V. position (50 Hz) 0 - 15
C07	Bright Data to MAX	0~255	20	Effective brightness range from center detent to maximum
C08	Bright Data to MIN	0~255	20	Effective brightness range from center detent to minimum

No.	Item	Variable range	Initial value	Remarks
C09	Chroma Data to MAX	0~255	30	Effective chroma range from center detent to maximum
C10	Chroma Data to MIN	0~255	50	Effective chroma range from center detent to minimum
C11	Contrast Data to MAX	0~255	20	Effective contrast range from center detent to maximum
C12	Contrast Data to MIN	0~255	20	Effective contrast range from center detent to minimum
C13	Phase Data to MAX	0~255	30	Effective phase range from center detent to maximum
C14	Phase Data to MIN	0~255	30	Effective phase range from center detent to minimum
C15	Signal	0~255	10	Signal Status display check time when signal change or display after data x 32 ms when counter is 0 - 127, not displayed when 127 - 255
C16	System detect	0~255	0	0: automatic, 1: 3.58 MHz, 2: 4.43 MHz

No.	On-screen color setting data	No.	On-screen color setting data
129	Blue	0	Black (darkens during blue check)
130	Green	1	Black (brightens during blue check)
131	Aqua	2	Green (darkens during blue check)
132	Red	3	Green (brightens during blue check)
133	Magenta	4	Red (darkens during blue check)
134	Yellow	5	Red (brightens during blue check)
135	White	6	Orange (darkens during blue check)
136	Black	7	Orange (brightens during blue check)

Set-up menu entry

1. While holding Enter depressed, press Menu.
2. The Set-up menu is displayed on the screen.



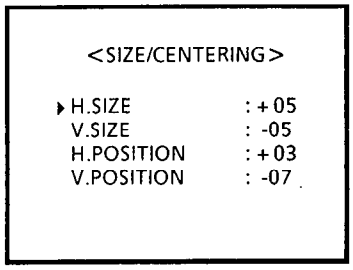
Set-up main menu

Item selection

■ Size/centering, white balance adjust, remote select

- Size/centering items are displayed only when RGB input is selected.

1. Press the up [↑] or down arrow [↓] to select Size/Centering items.
2. After selecting the item, press Enter.
3. The adjustment mode menu is displayed.
4. Again press Enter to display the adjustment mode sub-menu for each adjustment item (select adjustment item with up [↑] or down arrow [↓]).
5. Press Menu to display the original adjustment mode menu.
6. Perform in the same manner for White balance adjust and Remote select.



Adjustment mode menu

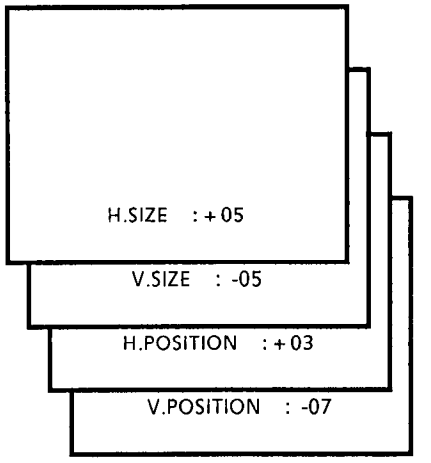
■ Status display

1. Press the up [↑] or down arrow [↓] to select the status display items.
2. Press the left [←] or right arrow [→] to select on/off.

■ Control lock

- Except for sound volume, all control operations are inhibited from the front control buttons, Phase, Chroma, Bright and Contrast controls, and the remote controller (sound volume remains operational).

1. Press the up [↑] or down arrow [↓] to select Control Lock.
2. Press the left [←] or right arrow [→] to select on/off.
3. The status just prior to selecting On is held and after exiting the set-up main menu, control adjustment is inhibited.
4. To release the control lock, press Enter and Menu to display the set-up main menu, then set Control Lock to Off.



Adjustment mode sub-menu

H.SIZE→V.SIZE→H.POSITION→V.POSITION

Setting value change

- Set for displaying the adjustment mode menu or the adjustment mode sub-menu.

1. Press the right arrow [→] to change the adjustment value in the + direction.
2. Press the left arrow [←] to change the adjustment value in the - direction.
3. Press the up [↑] or down arrow [↓] to change the adjustment item.
4. Press Menu to return the set-up main menu. (At the adjustment mode sub-menu, again press Menu.)

Set-up menu exit

1. When settings are complete, press Menu.
2. The screen display extinguishes and the set-up menu is exited.

Set-up menu checks

■ White balance

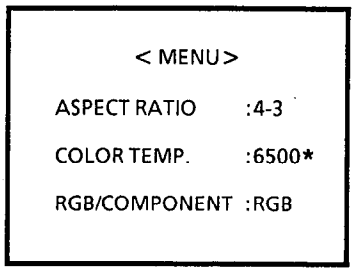
To check if adjustment has changed:

1. Press Menu to display the user main menu.
2. If an asterisk (*) appears at the Color Temp. item, the setting has been changed.

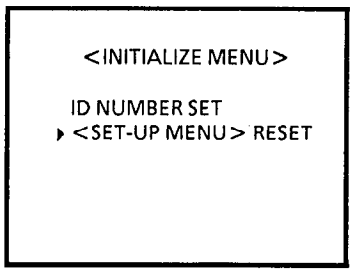
■ Set-up menu initialize

To return changed Size/Centering and White Balance Adjust to original status (initialize);

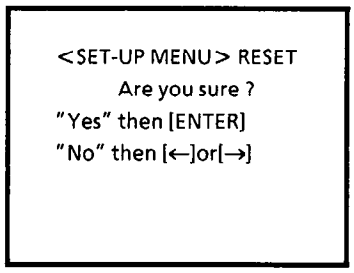
1. Hold the mainframe down arrow [↓] and Menu depressed, and set power on (inoperable from remote controller).
2. The initialize menu is displayed (hold depressed until menu appears).
3. Select Set-up Menu Reset and press Enter.
4. The set-up reset menu is displayed.
5. Press Enter to return the standard settings. Note that Remote Elect, Status Display and Control Lock are initialized and ID No. is cleared to 0.



User main menu



Initialize menu



Set-up reset menu

Memory IC replacement notes

This model uses non-volatile memory ICs. When these are replaced, the data must be reset.

Video and deflection system data are stored in IC103. If this is replaced without entering the data, a normal picture will not be obtained. When replacing, be sure to use an IC(ST24BM-1400) containing the (initial value) data.

■ Set-up menu record

Press Menu and at the menu display, check if an asterisk (*) appears after Color Temp. If the asterisk appears, the user has set the values according to personal preference. To the extent possible, make a memo of the setting values before replacing the IC.

■ IC replacement steps

1. To the extent possible, make a memo of the set-up menu and adjustment mode menu contents.
2. Switch off the power and disconnect the power cord from the outlet.
3. Replace IC103.
4. Reconnect the power cord to the outlet and switch power on.
5. Refer to the memo and enter the setting values.
6. Perform adjustments according to the adjustment items.

SERVICE ADJUSTMENTS

PRIOR TO STARTING ADJUSTMENT

1. Supply power to the set and measuring instruments and allow to warm up for at least 30 minutes.
2. Confirm the proper AC power voltage is being supplied.
3. Use care not to disturb controls and switches not mentioned in the adjustment items.
4. Refer to adjustment settings and set user operated controls (BRIGHT, CONTRAST, PHASE, CHROMA, etc.) to the indicated positions.

TOOLS AND FIXTURES FOR ADJUSTMENT

- DC voltmeter (digital voltmeter)
- Oscilloscope
- Signal generator (PAL/NTSC systems)
  - Color bar and split color bar patterns
  - Crosshatch pattern
  - Cross pattern
  - Red raster pattern
  - Green raster pattern
  - Blue raster pattern
  - Philips pattern (including R-Y and B-Y) — Desirable
  - TV resolution pattern — Desirable
- Remote control unit (RM-C550W) — Adjustments easier if available
- Color analyzer — Desirable
- High voltage meter — Desirable

ADJUSTMENT SETTINGS

1. **Front controls**

PHASE	Detent
CHROMA	Detent
BRIGHT	Detent
CONTRAST	Detent
VOLUME	MIN

2. **Front switches**

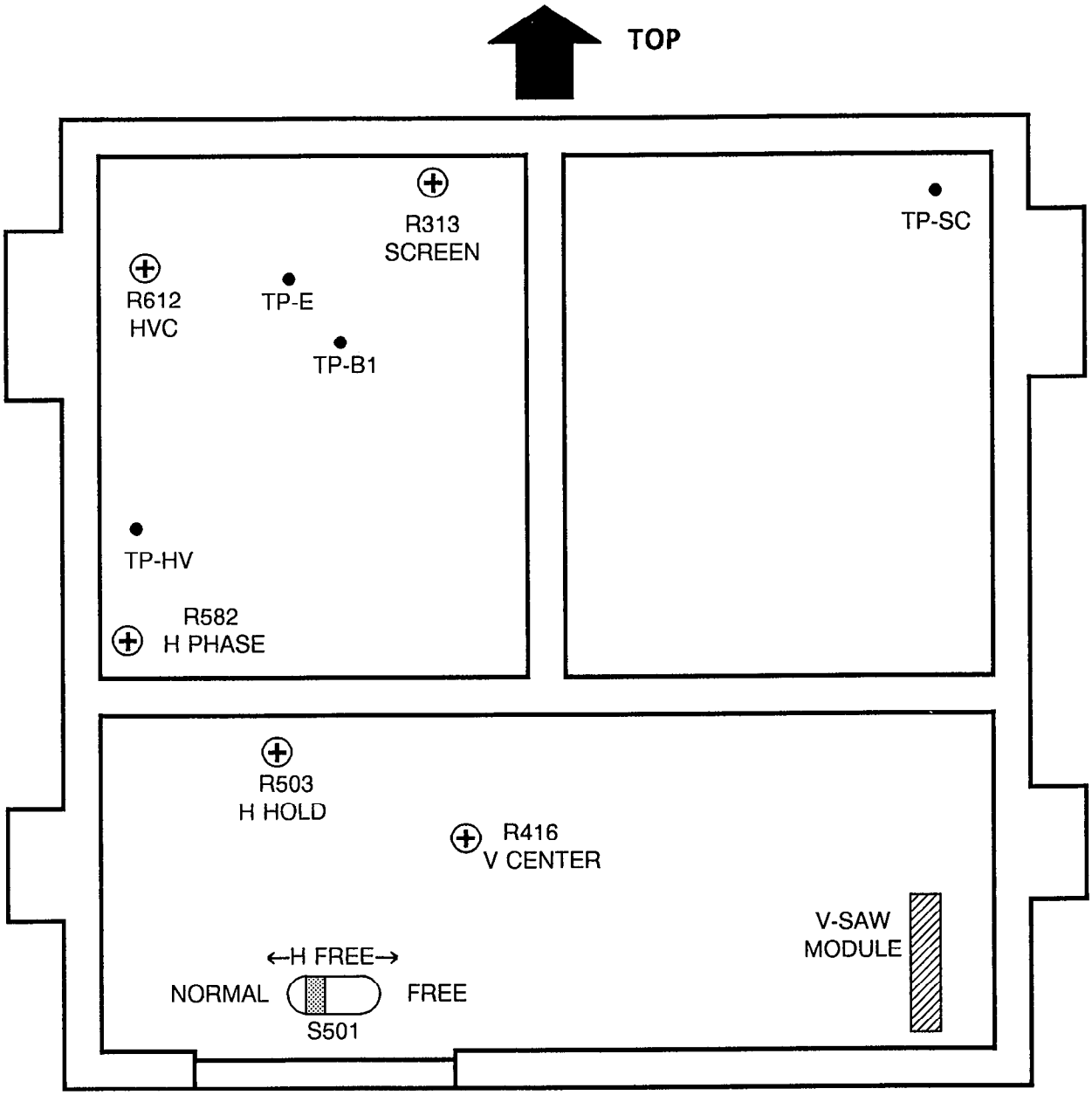
INPUT SELECT	VIDEO A	
EXT SYNC	INT	Switched not depressed
UNDER SCAN	OVER	〃
PULSE CROSS	OFF	〃
COLOR OFF	COLOR	〃
BLUE CHECK	OFF	〃
MEMORY MODE	OFF	〃

3. **Menu screen**

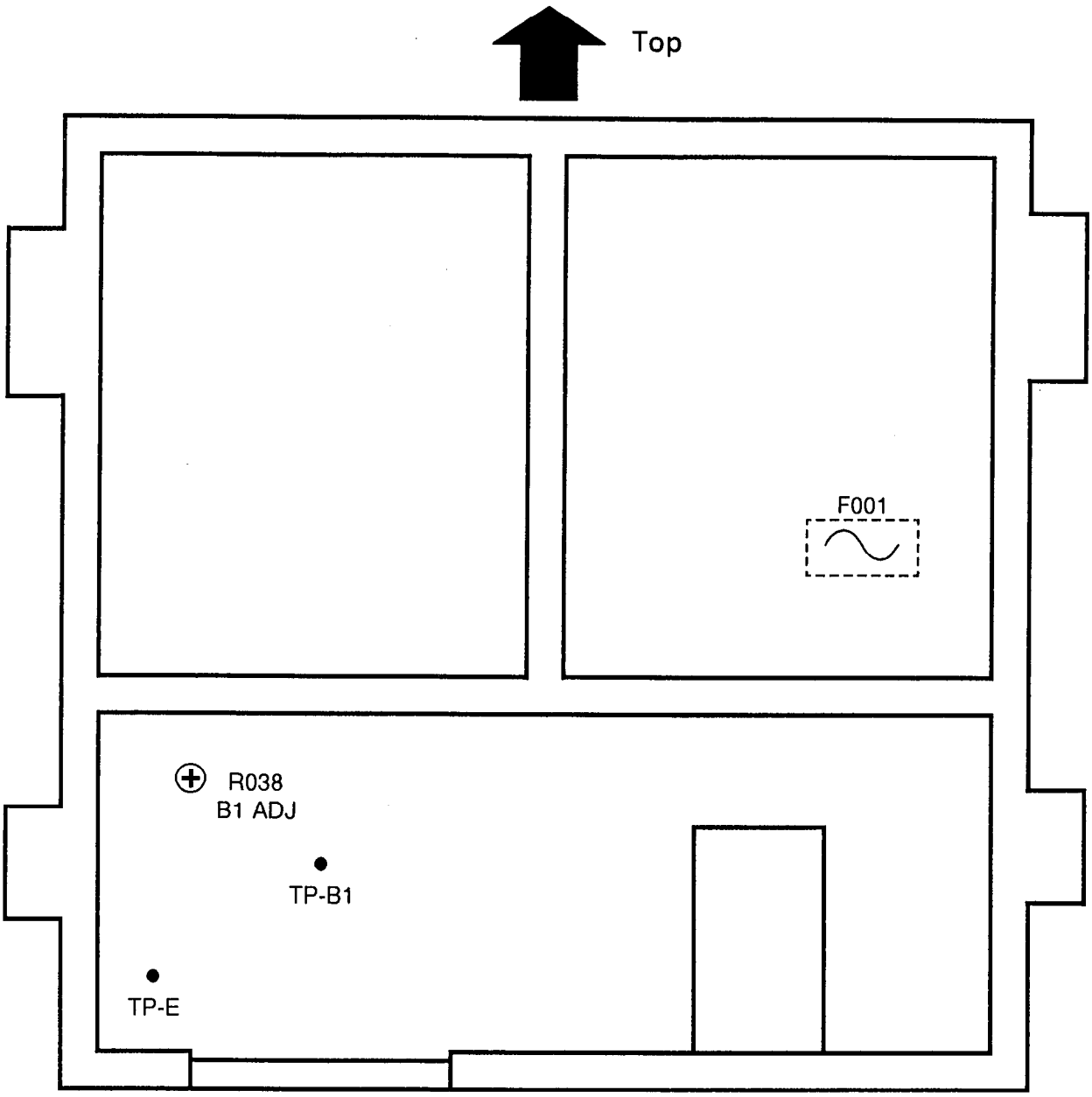
ASPECT RATIO	4 - 3
FILTER SELECT	COMB
PEAKING FREQ.	2.6MHz
PEAKING LEVEL	0dB
AFC	NORMAL
COLOR TEMP.	6500
NTSC SETUP	0
COMPO. LEVEL	SMPTE
RGB/COMPONENT	RGB

ADJUSTMENT LOCATIONS

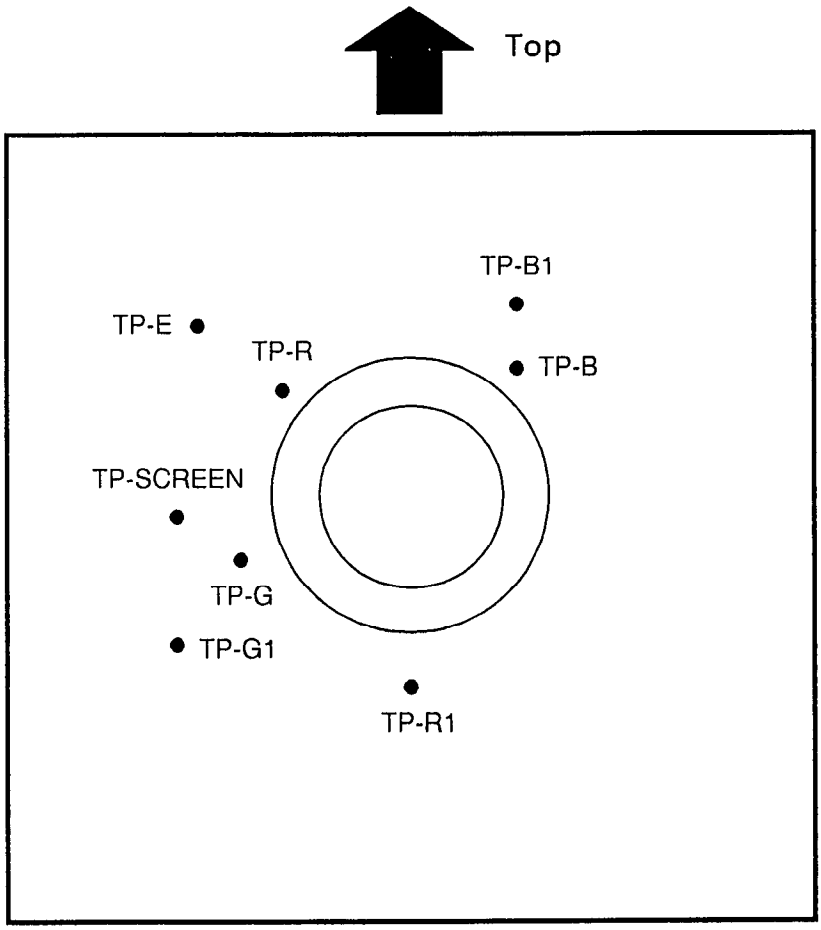
■ DEFLECTION PWB (pattern side)



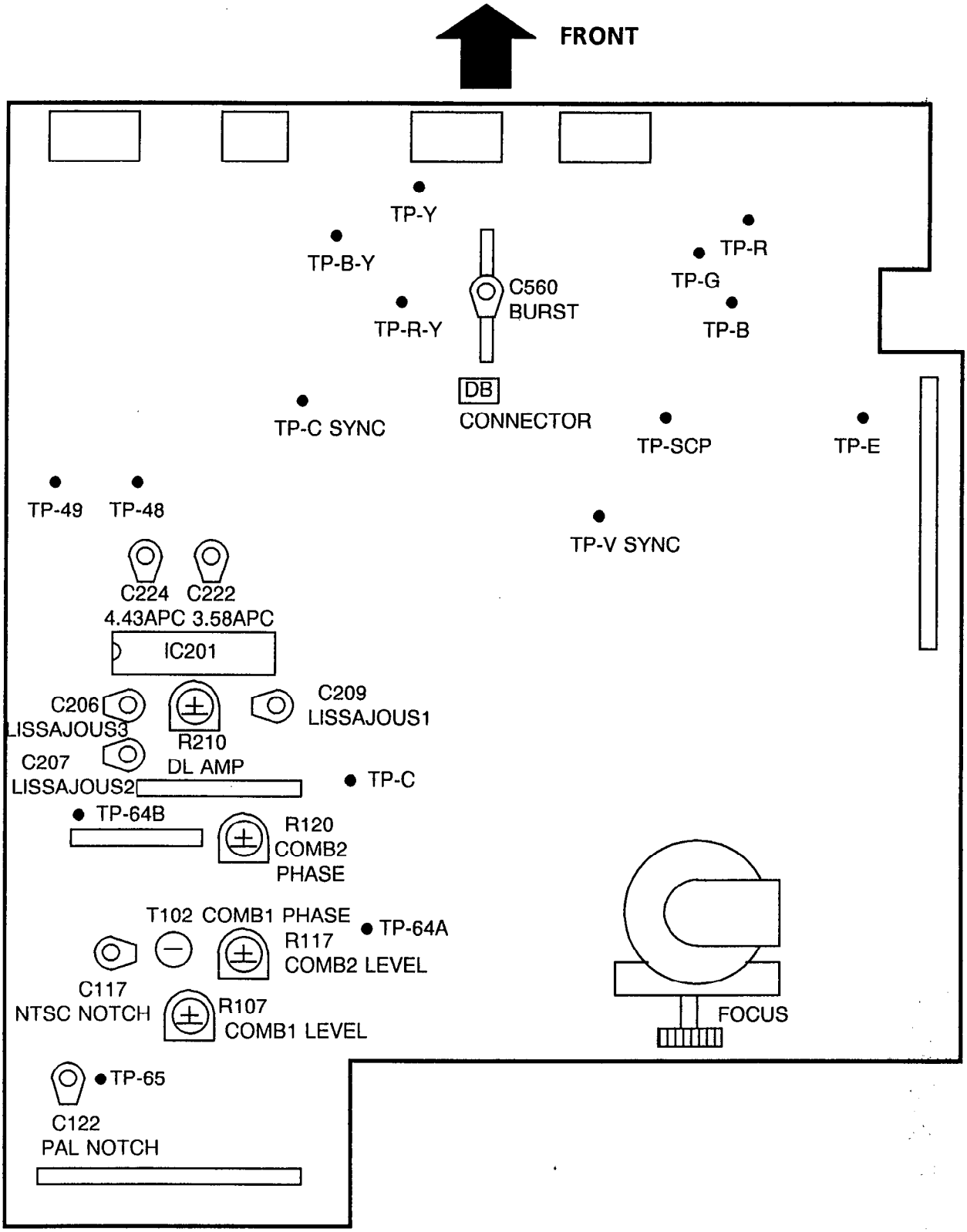
■ **Power PWB (pattern side)**



■CRT socket PWB (pattern side)



■SIGNAL PWB (parts side)



■HOW TO CHECK THE HIGH VOLTAGE HOLD CIRCUIT

1. HIGH VOLTAGE HOLD DOWN CIRCUIT

After repairing of the high voltage hold down circuit shown in Fig. 1.

This circuit shall be checked to operate correctly.

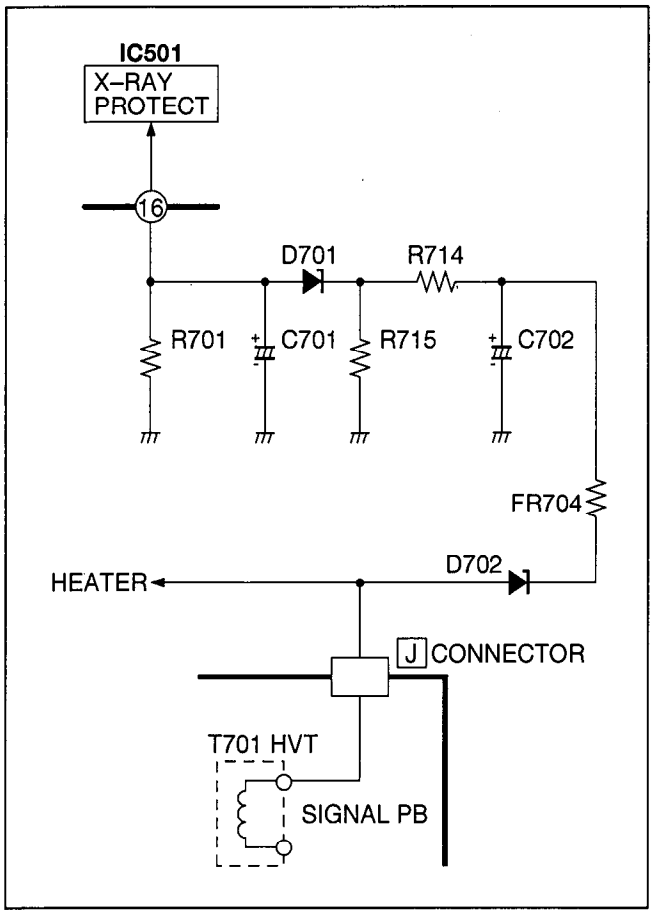


Fig. 1

11) Turn the service equipment #1 switch OFF then disconnect the equipment from the G1 connector.
12) Disconnect the service equipment #2 from the G connector then put the G connector back the original condition.

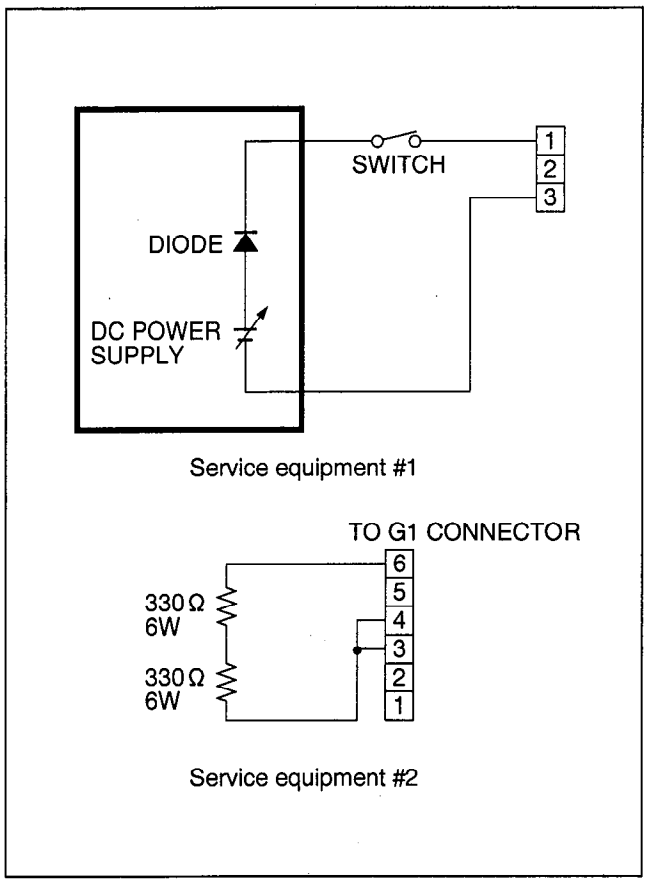


Fig. 2

2. CHECKING OF THE HIGH VOLTAGE HOLD DOWN CIRCUIT

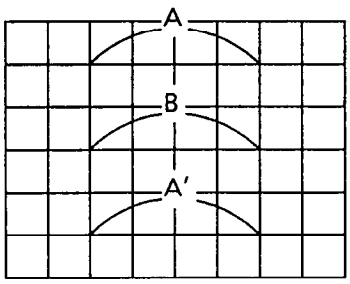
1) Make sure that power switch is at OFF position.
2) Connect the High Voltage Meter to the CRT Anode.
3) Input the NTSC crosshatch pattern.
4) Turn the power switch ON.
5) Turn Brightness and Contrast controls to the minimum.
6) Turn the power switch OFF.
7) Remove the G connector in the Deflection PB and connect the self-making service equipment #2.
8) Connect the self-making service equipment #1 to the G1 connector than turn the power switch of the monitor ON.
   Be sure that the switch of the equipment must be OFF position.
9) Set the DC power supply 85V then turn the equipment switch ON.
10) Gradually increase the DC voltage from 85V. Confirm the High Voltage will disappear at the voltage between 27.0~29.0kV. After confirming, turn the power switch of the monitor OFF.

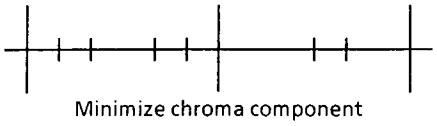
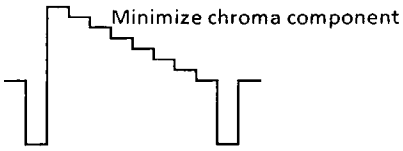
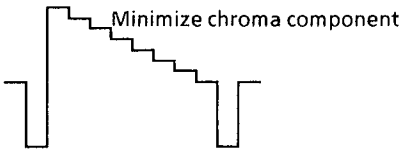
*** Notice**

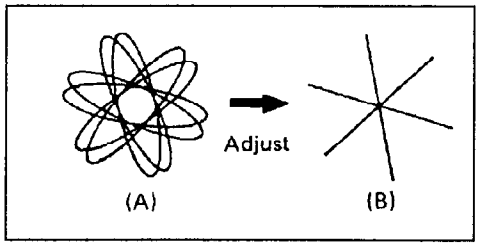
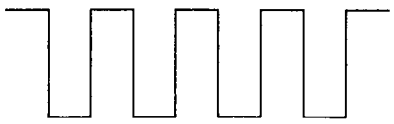
- While checking, sometimes the picture may roll vertically or the picture may be back. It is no effect to check this circuit.
- Self-making service equipments.
  - Service equipment #1:
    The DC power supply requires to have over 1A DC current.
    Use the diode RG4C/RU30/RU3AM/RU4AM or the same type.
  - Service equipment #2:
    The total resistance must be 660Ω.
    The total reted power (W; wattage) must be over 12W.

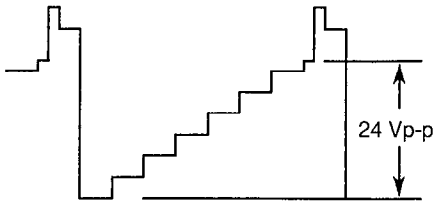
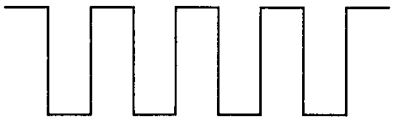
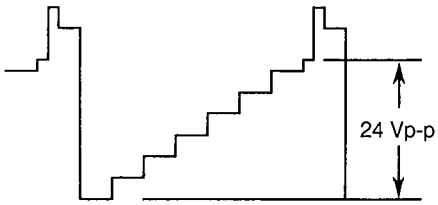
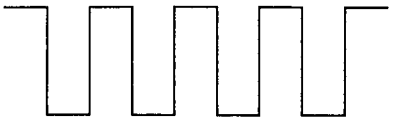
ADJUSTING STEP

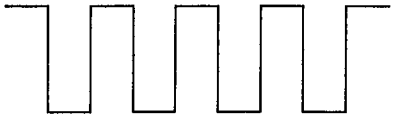
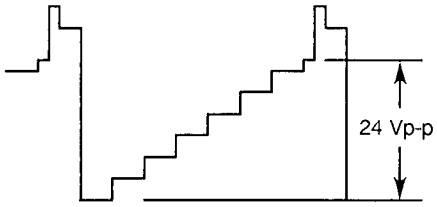
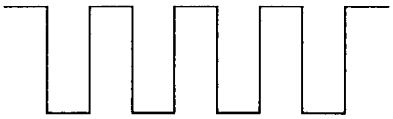
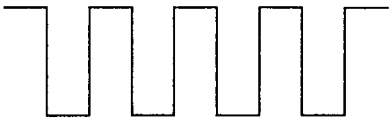
Item	Test equipment	Test points	Adjustment locations	Adjustment procedure
B1 voltage check	Voltmeter Variable transformer	TP-B1 TP-E	R038 (B1 adj) [Power PBW]	1. Set power supply voltage to 198 V. 2. Set contrast and bright to minimum and produce a black screen. 3. Connect voltmeter between TP-B1 and TP-E. Switch on power. 4. Adjust R038 (B1 adj) to set the B1 voltage to 85.0 ± 0.2 V. 5. Set the power supply voltage to 264 V. 6. Check for B1 voltage of 85.0 ± 0.2 V. 7. Return the contrast and bright controls to the detent positions.
High voltage check	High voltage meter Signal generator (All-black signal)			1. Set the Ext Sync switch to Ext. 2. Connect a synchronization signal to Ext Sync. 3. When the raster appears, reduce the bright control. 4. Connect the high voltage meter to the anode and check for 24.0 - 25.0 KV. 5. Return the Ext Sync switch to Int.
v.deflection center	Signal generator (Resolution pattern)		D02(NTSC V SHIFT) [SERVICE MENU] R416(V CENTER) [Deflection PWB]	• Perform after purity adjustment. • Adjust deflection yoke inclination. 1. At service menu, set D02 to 32. 2. Adjust R416 (V phase) to align the picture center with the CRT center.
Screen	Oscilloscope Signal generator (Color bar)	TP-SC	R313 (SCREEN) [Deflection PWB]	1. Connect oscilloscope to TP-SC. 2. Adjust R313 (Screen) to set the screen voltage to 450 ± 10 V.
Focus	Signal generator (Resolution pattern)		FOCUS VR [HVT]	1. Adjust the Focus VR for optimum focus where moire is not apparent. 2. Darken the picture and and adjust the focus by turning counter-clockwise from the position where focus is poor. 3. Alternately repeat the above steps to obtain the optimum position. • Focus can be adjusted easily by displaying the menu.
H frequency	Signal generator (Resolution pattern)		D06(H SHIFT) [SERVICE MENU] S501 (H FREE SW) R503(H HOLD) [Deflection PWB]	1. At the service menu, set D06 to 32. 2. Set S501 (H Free SW) to Free. 3. Adjust screen sync with R503 (H Hold). 4. Set S501 (H Free SW) to Normal. 5. Change the signal, then return the previous signal. Confirm absence of sync disturbance.
H center (NTSC)	Signal generator (Resolution pattern)		D06(H SHIFT) [SERVICE MENU] R582(H PHASE) [Deflection PWB]	1. At the service menu, set D06 to 32. 2. Adjust R582 (H Phase) to align the picture center with the CRT center.

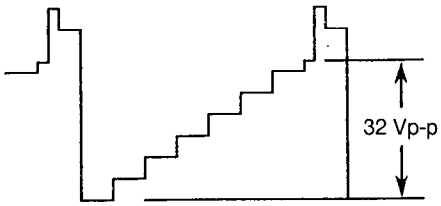
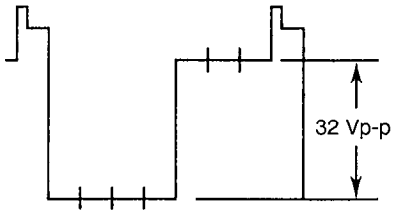
Item	Test equipment	Test points	Adjustment locations	Adjustment procedure
HVC	Voltmeter Signal generator (All-black signal)	TP-HV	R612(HVC) [Deflection PWB]	1. Set Ext Sync to Ext and supply a horizontal sync signal input. 2. When the raster appears, reduce the Bright control. 3. Connect the voltmeter to TP-HV. 4. Adjust R612 (HVC) for 2.0 ± 0.1 V.
H gain (NTSC)	Signal generator (Resolution or crosshatch pattern)		D05(H SIZE) D21(H SIZE) D22(H SHIFT) [SERVICE MENU]	1. At the service menu, set D05 to adjust the horizontal size to 95 %. 2. Set the Scan Size to Under. 3. Set D21 to 00. 4. Set D22 to 253. 5. Return the Scan Size to normal.
H center H gain (PAL)	Signal generator (Resolution or crosshatch pattern)		D15(H SHIFT) D14(H SIZE) [SERVICE MENU]	1. Adjust D15 to align the picture center with the CRT center. 2. Adjust D14 to set the horizontal size to 95 %.
V gain, V center, V linearity (NTSC)	Signal generator (Resolution pattern)		D03(V LINEARITY) D01(V SIZE) D17(V SIZE) D19(V LINEARITY) D18(V SHIFT) [SERVICE MENU]	1. Check that the horizontal line of the video signal center is at the CRT center (if shifted, adjust R416). 2. Adjust the picture vertical linearity (scan ratio) with D03. 3. Adjust the screen top and bottom edges to 95 % with D01. 4. Set the Scan Size to Under. 5. Set D17 to 230. 6. Set D19 to 00. 7. Set D18 to 00. 8. Return the Scan Size to normal.
V gain, V center, V linearity (PAL)	Signal generator (Resolution pattern)		D11(V SHIFT) D12(V LINEARITY) D10(V SIZE) [SERVICE MENU]	1. Adjust D11 to align the video signal center with the CRT center. 2. Adjust the picture vertical linearity (scan ratio) with D12. 3. Adjust the screen top and bottom edges to 95 % with D10.
Side pincushion (NTSC/PAL)	Signal generator (Crosshatch NTSC/PAL)		D07(PIN AMP) D23(PIN AMP) D16(PIN AMP) [SERVICE MENU]	1. Adjust side pincushion with D07 so that A = B. 2. Set the Scan Size to Under. 3. Adjust side pincushion with D23 so that A = B. 4. Supply a PAL crosshatch input. 5. Return the Scan Size to normal. 6. Adjust side pincushion with D16 so that A = B. 

Item	Test equipment	Test points	Adjustment locations	Adjustment procedure
Comb filter (NTSC)	Oscilloscope Signal generator (Color bar)	TP-64A TP-64B	R107 (COMB1 LEVEL) T102 (COMB1 PHASE) R117(COMB2 LEVEL) R120(COMB2 PHASE) [Signal PWB]	1. Set the menu Filter Select to Comb. 2. Connect oscilloscope to TP-64A. 3. Alternately adjust R107 and T102 to minimize the chroma component.  Minimize chroma component 4. Connect oscilloscope to TP-64. 5. Alternately adjust R117 and R120 to minimize the chroma component.  Minimize chroma component
Notch filter	Oscilloscope Signal generator (Color bar NTSC/PAL)	TP-65	C117 (NTSC NOTCH) C122 (PAL NOTCH) [Signal PWB]	1. Set the menu Filter Select to Notch. 2. Connect oscilloscope to TP-65. 3. Adjust C117 to minimize the chroma component. 4. Supply a PAL color bar input. 5. Adjust C122 to minimize the chroma component.  Minimize chroma component
Color sync (NTSC)	Signal generator (Color bar) 10 KΩ resistor Shorting fixture		C222(3.58APC) [Signal PWB]	1. Connect a 10 KΩ resistor between IC201 pin 13 and +B (12 V). 2. Connect a shorting fixture between IC201 pin 14 and ground. 3. Adjust to synchronize the color bar with C222. 4. Remove the resistor and shorting fixture. 5. Change the input signal, then return the color bar. Confirm absence of sync disturbance.

Item	Test equipment	Test points	Adjustment locations	Adjustment procedure
APC (PAL)	Oscilloscope Signal generator (Color bar, split color bar) 10 KΩ resistor 5.6KΩ resistor Shorting fixture	TP-48 TP-49	C224(4.43APC) R210(DL AMP) C206(LISSAJOUS 3) C207(LISSAJOUS 2) C209 [Signal PWB]	1. Connect a 10 KΩ resistor between IC201 pin 13 and +B (12 V). 2. Connect a shorting fixture between IC201 pin 14 and ground. 3. Connect a 5.6KΩ resistor between IC201 pin 8 and ground. 4. Adjust to synchronize the color bar with C224. 5. Remove the resistor and shorting fixture. 6. Connect an oscilloscope to TP-48 and TP-49 and display X-Y coordinates. 7. Adjust R210 and C206 to obtain the waveform indicated in the figure. If inadequate, adjust C207 and C209.  8. Supply a PAL split color bar input and adjust C224 to minimize coloration in the R-Y and B-Y components.
Pulse cross	Signal generator (Color bar NTSC/PAL)		R570(V.SYNC) [Signal PWB]	1. Set the pulse cross switch to on. 2. Adjust R570 to eliminate luminance and burst signal variation in the V blanking period. 3. Supply a PAL color bar input. 4. Confirm absence of luminance and burst signal variation in the V blanking period. 5. Again supply an NTSC color bar input and again confirm absence of luminance and burst signal variation in the V blanking period. 6. If variation is present, again adjust R570. 7. Set the pulse cross switch to off.
Chroma and phase (Video input, NTSC)	Oscilloscope Signal generator (Color bar)	TP-B [CRT socket PWB]	S02(CHROMA) S03(PHASE) [SERVICE MENU]	1. Supply an NTSC color bar to Video A. 2. Set the menu Filter Select to Notch. 3. Connect oscilloscope to TP-B. 4. Alternately adjust S02 and S03 to obtain a straight line waveform. 5. Set Filter Select to Comb. 

Item	Test equipment	Test points	Adjustment locations	Adjustment procedure
Contrast (Video input, NTSC)	Oscilloscope Signal generator (Color bar)	TP-G [CRT socket PWB]	S04 (CONTRAST) [SERVICE MENU]	1. Supply an NTSC color bar input to Video A. 2. Set the Color Off switch to off. 3. Connect oscilloscope to TP-G. 4. Adjust the waveform level to 24 Vp-p with S04. 5. Set the Color Off switch to Color. 
Chroma (Video input, PAL)	Oscilloscope Signal generator (Color bar)	TP-B [CRT socket PWB]	S05 (CHROMA) [SERVICE MENU]	1. Supply an NTSC color bar input to Video A. 2. Connect oscilloscope to TP-G. 3. Adjust S05 to obtain a straight line waveform. 
Contrast (Video input, PAL)	Oscilloscope Signal generator (Color bar)	TP-G [CRT socket PWB]	S06 (CONTRAST) [SERVICE MENU]	1. Supply an NTSC color bar input to Video A. 2. Set the Color Off switch to off. 3. Connect oscilloscope to TP-G. 4. Adjust the waveform level to 24 Vp-p with S06. 5. Set the Color Off switch to Color. 
Phase (Video input,NTSC 4.43)	Oscilloscope Signal generator (Color bar NTSC 4.43)	TP-B [CRT socket PWB]	S07 (PHASE) [SERVICE MENU]	1. Supply an NTSC 4.43 color bar input to Video A. 2. Connect oscilloscope to TP-G. 3. Adjust S07 to obtain a straight line waveform. 

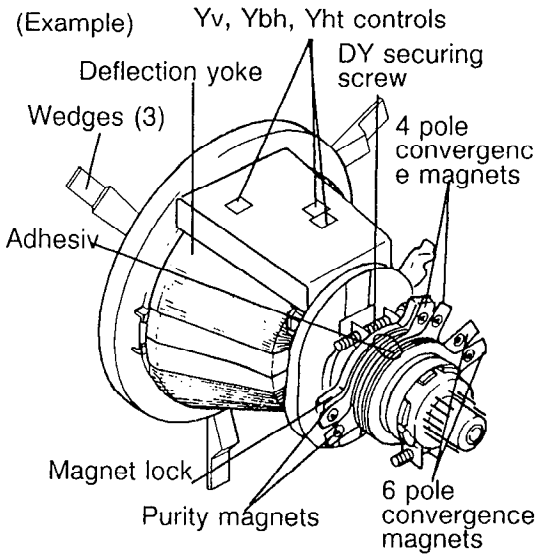
Item	Test equipment	Test points	Adjustment locations	Adjustment procedure
Chroma and phase (Y/C input, NTSC)	Oscilloscope Signal generator (Color bar)	TP-B [CRT socket PWB]	S08 (CHROMA) S09(PHASE) [SERVICE MENU]	1. Supply an NTSC color bar input to Y/C In. 2. Set the menu Filter Select to Notch. 3. Connect oscilloscope to TP-B. 4. Alternately adjust S08 and S09 to obtain a straight line waveform. 5. Set Filter Select to Comb. 
Contrast (Y/C input, NTSC)	Oscilloscope Signal generator (Color bar)	TP-G [CRT socket PWB]	S10 (CONTRAST) [SERVICE MENU]	1. Supply an NTSC color bar input to Video A. 2. Set the Color Off switch to off. 3. Connect oscilloscope to TP-G. 4. Adjust the waveform level to 24 Vp-p with S10. 5. Set the Color Off switch to Color. 
Chroma (Y/C input, PAL)	Oscilloscope Signal generator (Color bar)	TP-B [CRT socket PWB]	S11 (CHROMA) [SERVICE MENU]	1. Supply a PAL color bar input to Video A. 2. Connect oscilloscope to TP-B. 3. Adjust S11 to obtain a straight line waveform. 
Chroma (Component input, NTSC)	Oscilloscope Signal generator (Color bar)	TP-B [CRT socket PWB]	S12 (CHROMA) [SERVICE MENU]	1. Set the menu RGB/Component to Component. 2. Supply an NTSC color bar input to Component In. 3. Connect oscilloscope to TP-B. 4. Adjust S12 to obtain a straight line waveform. 5. Return the menu RGB/Component to original setting. 

Item	Test equipment	Test points	Adjustment locations	Adjustment procedure
Contrast (Component input, NTSC)	Oscilloscope Signal generator (Color bar)	TP-G [CRT socket PWB]	S13 (CONTRAST) [SERVICE MENU]	1. Set the Brightness control to minimum. 2. Set the menu RGB/Component to Component. 3. Supply an NTSC color bar input to Component In. 4. Set the Color Off switch to off. 5. Connect oscilloscope to TP-G. 6. Adjust the waveform level to 32 Vp-p with S13. 7. Set the Color Off switch to Color. 8. Return the menu RGB/Component to original setting. 
Contrast (RGB input, NTSC)	Oscilloscope Signal generator (Color bar)	TP-G [CRT socket PWB]	S14 (CONTRAST) [SERVICE MENU]	1. Supply an NTSC color bar input to RGB In. 2. Connect oscilloscope to TP-G. 3. Adjust the waveform level to 32 Vp-p with S14. 
Color temperature (9300 K)	Signal generator (Resolution pattern, color bar) Color analyzer or color temperature meter		W01 (R CUTOFF) W02 (G CUTOFF) W03 (B CUTOFF) W04(R DRIVE) W05(G DRIVE) W06(B DRIVE) [SERVICE MENU]	1. Supply a resolution pattern input. 2. Check that the menu Color Temp. is 9300. 3. Set the Color Off switch to off. 4. Set W01 to 18, W03 to 21, W05 to 32, and W02 to 25. 5. Adjust W04 and W06 for the specified color temperature (reference: W04 = 25, W06 = 25) (X = 0.283, Y = 0.297) 6. Supply a color bar input (black and white). 7. Check for proper white balance tracking. If deviated in the dark components, adjust with W01 and W03. • Adjustment with color temperature meter: Apply the sensor to the CRT, adjust and measure. If deviated, repeatedly adjust and measure to obtain the specified color temperature.

Item	Test equipment	Test points	Adjustment locations	Adjustment procedure
Color temperature (6500 K)	Signal generator (Resolution pattern, color bar) Color analyzer or color temperature meter		W07 (R CUTOFF) W09 (B CUTOFF) W10(R DRIVE) W11 (G DRIVE) W12(B DRIVE) [SERVICE MENU]	1. Supply a resolution pattern input. 2. Set the menu Color Temp. to 6500. 3. Set the Color Off switch to off. 4. Set W07 to 25, W09 to 11, and W08 to 25. 5. Set W11 to 32. 6. Adjust W10 and W12 for the specified color temperature (reference: W10 = 28, W12 = 21) (X = 0.313, Y = 0.329) 7. Supply a color bar input (black and white). 8. Check for proper white balance tracking. If deviated in the dark components, adjust with W07 and W09. 9. Return the menu Color Temp. to original setting. • Adjustment with color temperature meter: Apply the sensor to the CRT, adjust and measure. If deviated, repeatedly adjust and measure to obtain the specified color temperature.
Bright	Signal generator (Split color bar)		S01 (BRIGHT) [SERVICE MENU]	1. Adjust S01 to where the split color 0 % black component faintly brightens. 2. Supply another signal and confirm absence of black deviation.
On screen menu	Signal generator (color bar)		NTSC SETUP COMPO. LEVEL COLOR TEMP. [Menu screen]	1. Press the MENU button to display the menu screen. 2. Set the NTSC SETUP item to 7.5. 3. Set the COMPO. LEVEL item to BETA75. 4. set the COLOR TEMP. item to 6500. 5. Again press the MENU button to release the menu screen.

Item	Test equipment	Test points	Adjustment locations	Adjustment procedure
Purity adjustment	Degaussing coil Signal generator(green raster, red raster,blue raster , cross pattern signals)		Purity magnets Convergence magnets	1. Be sure to degauss using the degaussing coil. 2. Carefully remove the wedges. 3. Peel the adhesive from the 6 magnets to allow turning the magnets. 4. Supply an green raster signal input. 5. Loosen the deflection yoke securing screw and slide the yoke fully rearward to produce a red circle display. 6. Overlap the long with short tabs of the 2 purity magnets and position these horizontally.

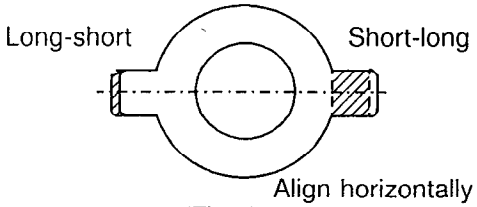
(Example)



(Fig.1)

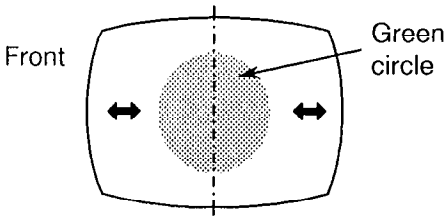
Note: Do not disturb Yv, Ybh and Yht controls.

*Set the 2 purity magnets horizontally.



(Fig.2)

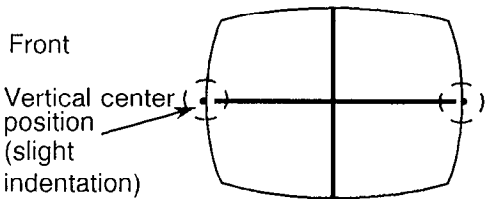
7. Adjust the rotational angle between the tabs to produce a green circle at the center of the screen.



Set the green area at the

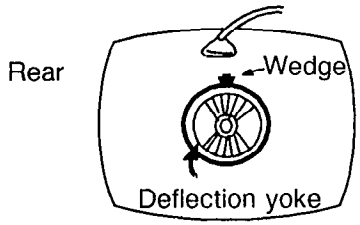
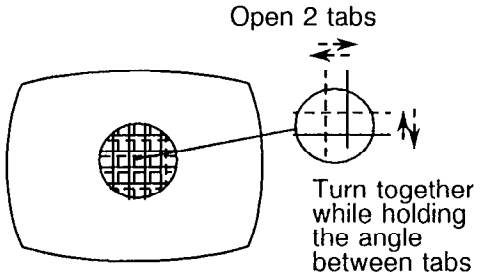
(Fig.3)

8. Supply a cross pattern input and check for deviation of the vertical center position.If deviated, while maintaining the angle between the tabs, rotate the magnets to center the vertical position to the extent possible.



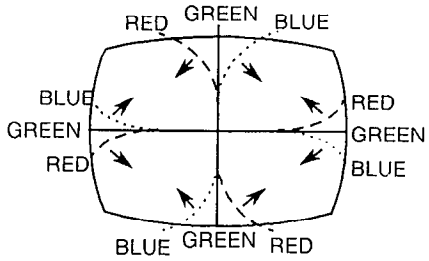
Set the indentations near the horizontal line(tolerance about ± 5 mm)

(Fig.4)

Item	Test equipment	Test points	Adjustment locations	Adjustment procedure
				9. Repeat steps 7 and 8. 10. Supply an all green signal input and shift the deflection yoke forward to where he overall screen is a green single color. 11. Also check the red and blue single color rasters. 12. Suitably tighten the deflection yoke securing screw to prevent forward to rearward shifting.
Static (center) convergence adjustment	**Signal generator(crosshatch)**		**Deflection yoke** **Wedges** **Convergence magnets**	1. Supply a crosshatch pattern input. 2. Move the deflection yoke up, down, left and right to roughly adjust the perimeter convergence.Temporarily secure with one wedge at the top.  (Fig.5) 3. Use the 4 pole magnets to overlap red and blue at the picture center to produce magenta. 4. Use the 6 pole magnets to overlap the green lines with the magenta. 5. If required, repeat steps 1 and 2.  (Fig.6)

Item	Test equipment	Test points	Adjustment locations	Adjustment procedure
Dynamic (perimeter) convergence adjustment	Signal generator(crosshatch)		Wedges Deflection yoke	1. Supply a crosshatch pattern input. 2. Remove the wedge temporarily securing the deflection yoke. 3. Wobble the deflection yoke vertically and set the convergence deviation as indicated in Fig.7.Again temporarily secure by inserting a wedge at the top. 4. Wobble the deflection yoke left and right and set the convergence deviation as indicated in Fig.8. 5. Alternately repeat steps 2 and 3 and adjust for minimum convergence deviation.
After completing convergence adjustment	Double sided tape Adhesive		Wedges Magnet lock	1. Insert the wedges as shown in Fig.9. 2. Tighten the deflection yoke securing screw. 3. Apply adhesive to secure the 6 magnets as indicated in Fig.1.

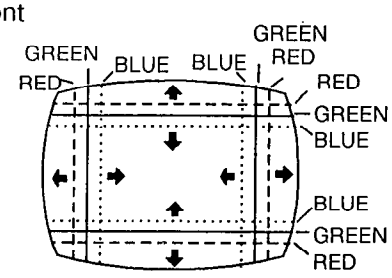
Front



Arrow directions when yoke is tilted upward
(opposite directions when tilted downward)

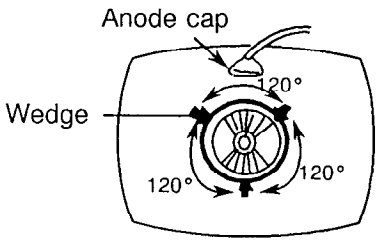
(Fig.7)

Front



Arrow directions when yoke is tilted rightward
(opposite directions when tilted leftward)

(Fig.8)



Securing with 3 wedges

(Fig.9)

Note: Double sided tape is applied to the wedges.Peel off the covering to secure.Do not reuse old wedges, replace them.

Wedge part number: CE40764-00A

Schematic Diagram and P.W. Boards

IMPORTANT SAFETY NOTICE

THE SHADED AREA ON THIS SCHEMATIC DIAGRAM INCORPORATES SPECIAL FEATURES IMPORTANT FOR PROTECTION FROM X-RADIATION, FIRE AND ELECTRICAL SHOCK HAZARDS.
WHEN SERVICING, IT IS ESSENTIAL THAT ONLY MANUFACTURER'S SPECIFIED PARTS BE USED FOR THE CRITICAL COMPONENTS IN THE SHADED AREAS OF THE SCHEMATIC.

■NOTE ON USING CIRCUIT DIAGRAMS

1. SAFETY

The components identified by the ⚠ symbol and shading are critical for safety. For continued safety replace safety critical components only with manufactures recommended parts.

2. SPECIFIED VOLTAGE AND WAVEFORM VALUES

The voltage and waveform values have been measured under the following conditions.

(1) Input signal : PAL Color bar signal
(2) Setting positions of each knob/button and variable resistor : Original setting position when shipped
(3) Internal resistance of tester : DC 20kΩ/V
(4) Oscilloscope sweeping time : H ⇒20μS/div
: V ⇒5mS/div
: Others ⇒Sweeping time is specified
(5) Voltage values : All DC voltage values

* Since the voltage values of signal circuit vary to some extent according to adjustments, use them as reference values.

3. INDICATION OF PARTS SYMBOL [EXAMPLE]

● In the PW board : R1209→R209

4. INDICATIONS ON THE CIRCUIT DIAGRAM

(1) Resistors

● Resistance value
No unit : [Ω]
K : [KΩ]
M : [MΩ]
● Rated allowable power
No indication : 1/6 [W]
Others : As specified
● Type
No indication : Carbon resistor
OMR : Oxide metal film resistor
MFR : Metal film resistor
MPR : Metal plate resistor
UNFR : Uninflammable resistor
FR : Fusible resistor

* Composition resistor 1/2 [W] is specified as 1/2S or Comp.

(2) Capacitors

● Capacitance value
1 or higher : [pF]
less than 1 : [μF]
● Withstand voltage
No indication : DC50 [V]
Others : DC withstand voltage [V]
AC indicated : AC withstand voltage [V]

* Capacitors
47/50 [Example]: Capacitance value [μF]/withstand voltage [V]

● Type
No indication : Ceramic capacitor
MY : Mylar capacitor
MM : Metalized mylar capacitor
PP : Polypropylene capacitor
MPP : Metalized polypropylene capacitor
MF : Metalized film capacitor
TF : Thin film capacitor
BP : Bipolar electrolytic capacitor
TAN : Tantalum capacitor

(3) Coils

No unit : [μH]
Others : As specified

(4) Power Supply

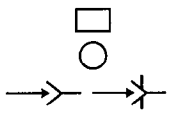

: B1
: B2 (12V)
: 5V

* Respective voltage values are indicated.

(5) Test Point


: Test point
: Only test point display

(6) Connecting method


: Connector
: Wrapping or soldering
: Receptacle

(7) Ground symbol


: LIVE side ground
: ISOLATED (NEUTRAL) side ground
: EARTH ground
: DIGITAL ground

5.NOTE FOR REPAIRING SERVICE

This model's power circuit is partly different in the GND. The difference of the GND is shown by the LIVE : (⊥) side GND and the ISOLATED(NEUTRAL) : (⏚) side GND. Therefore, care must be taken for the following points.

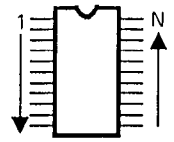
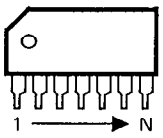
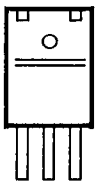
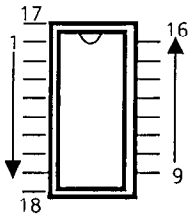
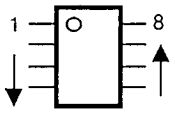
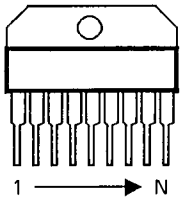
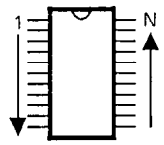
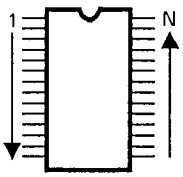
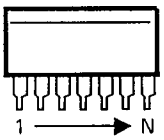
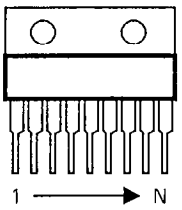
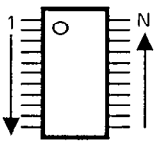
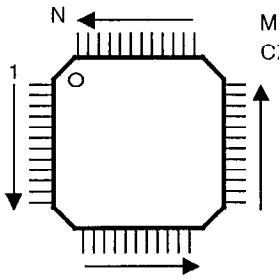
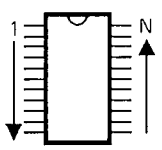
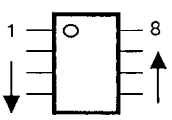
(1) Do not touch the LIVE side GND or the LIVE side GND and the ISOLATED(NEUTRAL) side GND simultaneously. If the above caution is not respected, an electric shock may be caused. Therefore, make sure that the power cord is surely removed from the receptacle when, for example, the chassis is pulled out.

(2) Do not short between the LIVE side GND and ISOLATED(NEUTRAL) side GND or never measure with a measuring apparatus (oscilloscope, etc.) the LIVE side GND and ISOLATED(NEUTRAL) side GND at the same time. If the above precaution is not respected, a fuse or any parts will be broken.

◇ **Since the circuit diagram is a standard one, the circuit and circuit constants may be subject to change for improvement without any notice.**

■ SEMICONDUCTOR SHAPES

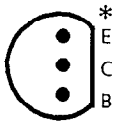
● IC

 TC4053BP TC4066BP HD74LS04P TC4538BP HD74LS05P HD74LS00P AN5640	 LA7016	 AN7808 AN7812F TA79012S AN7805F
 HA11423	 NJM4560D μPC358 ST24BM-1400	 μPC1498H
 FA5301P	 TDA4680 TDA4670 AN5625N	 μPC358HA
 AN5265	 MB90077PF-109	(Flat package IC)  MB89647PF-113 CXD2018Q
(Flat package IC)  HD74HC32FP HD74HC158FP	(Flat package IC)  μPC4558G-W	

● TRANSISTOR

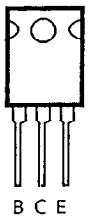
[Bottom View]

2SC1740S(R)
2SC3311A(Q)-T

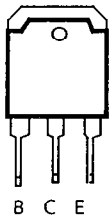


[Bottom View]

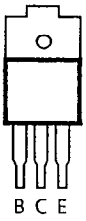
2SC3334
2SA1321
2SC1472K
2SA1370(E)
2SA562TM
2SC3187-T
2SC1959(Y)
2SA1309
2SC1815(YG)-T



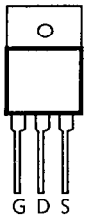
2SC4632



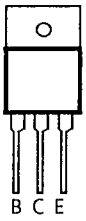
2SC4589-C1



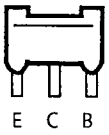
2SD1408
2SD1409



2SK1118

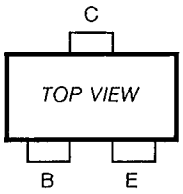


2SC4544



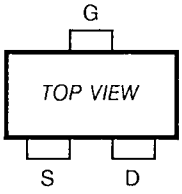
2SC4502

(CHIP TRANSISTOR)



2SC2712(YG)
2SA1162(YG)

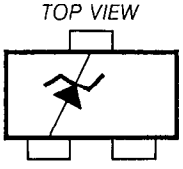
(CHIP FET)



2SK374(Q)

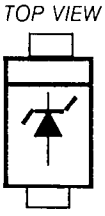
● DIODE

(CHIP DIODE)



MA3056(L)-W
MA3150(M)-W
MA151K-W

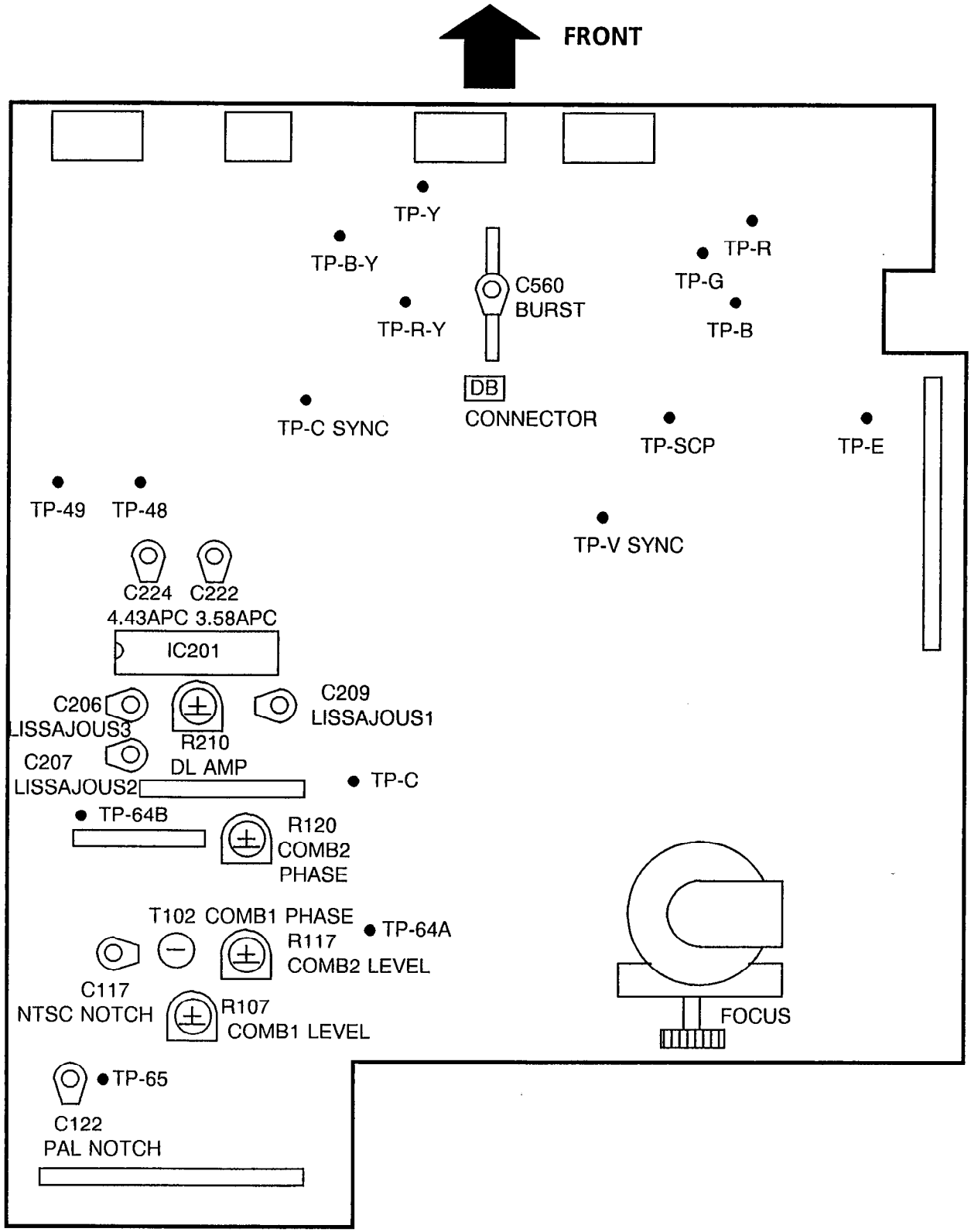
(CHIP DIODE)



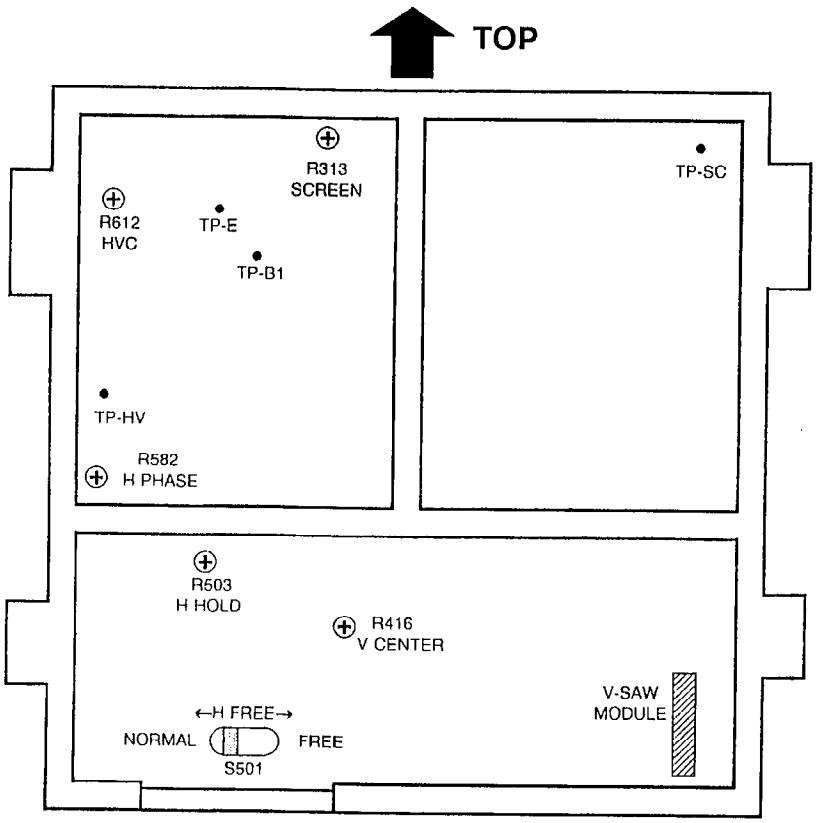
MA8054-W
MA8130-W

■ ALIGNMENT LOCATION

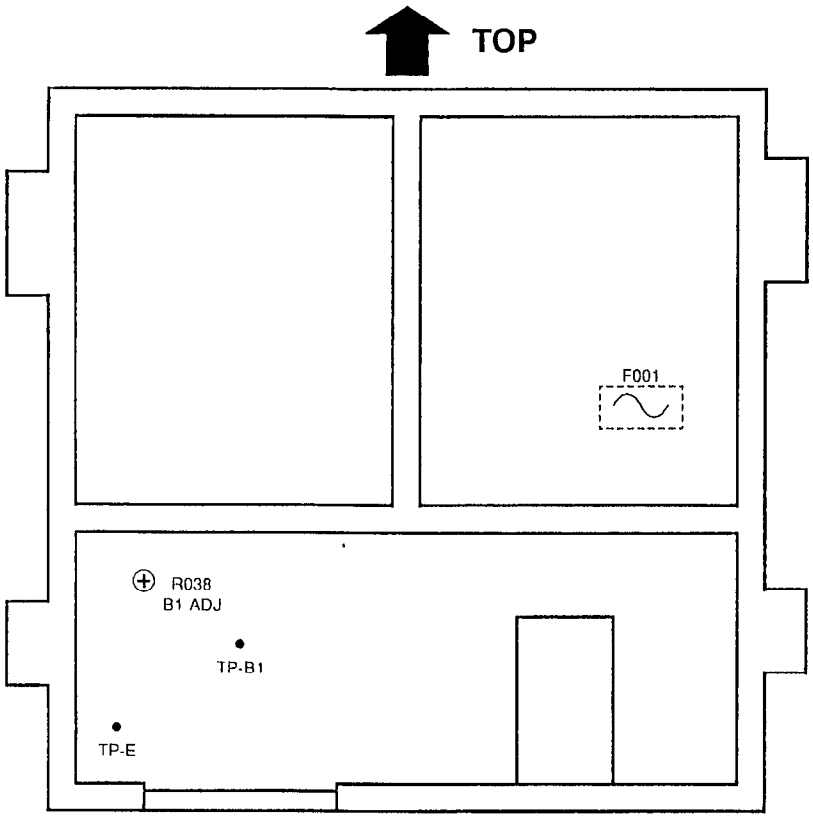
• SIGNAL PWB (PARTS SIDE)



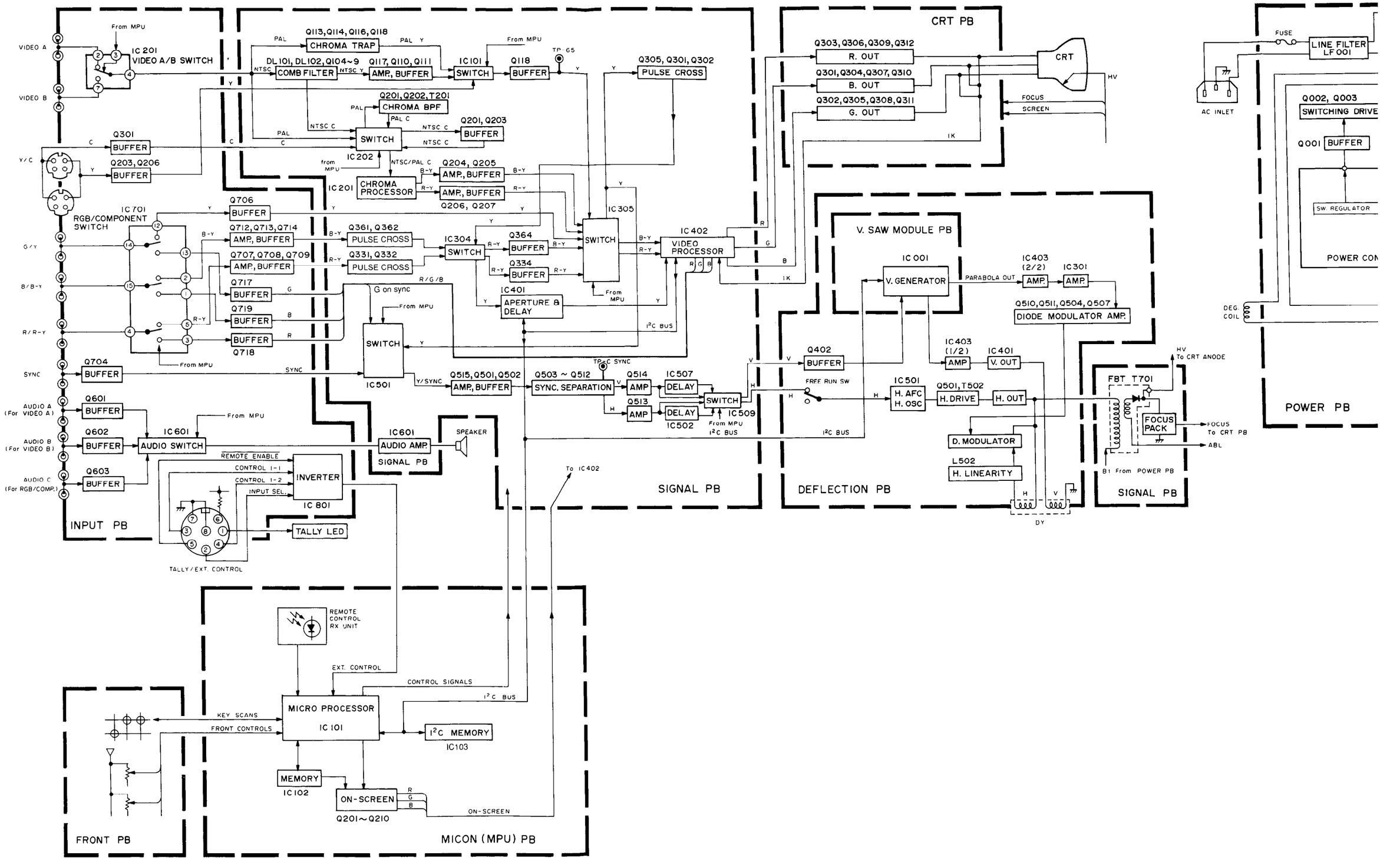
• DEFLECTION PWB (PATTERN SIDE)

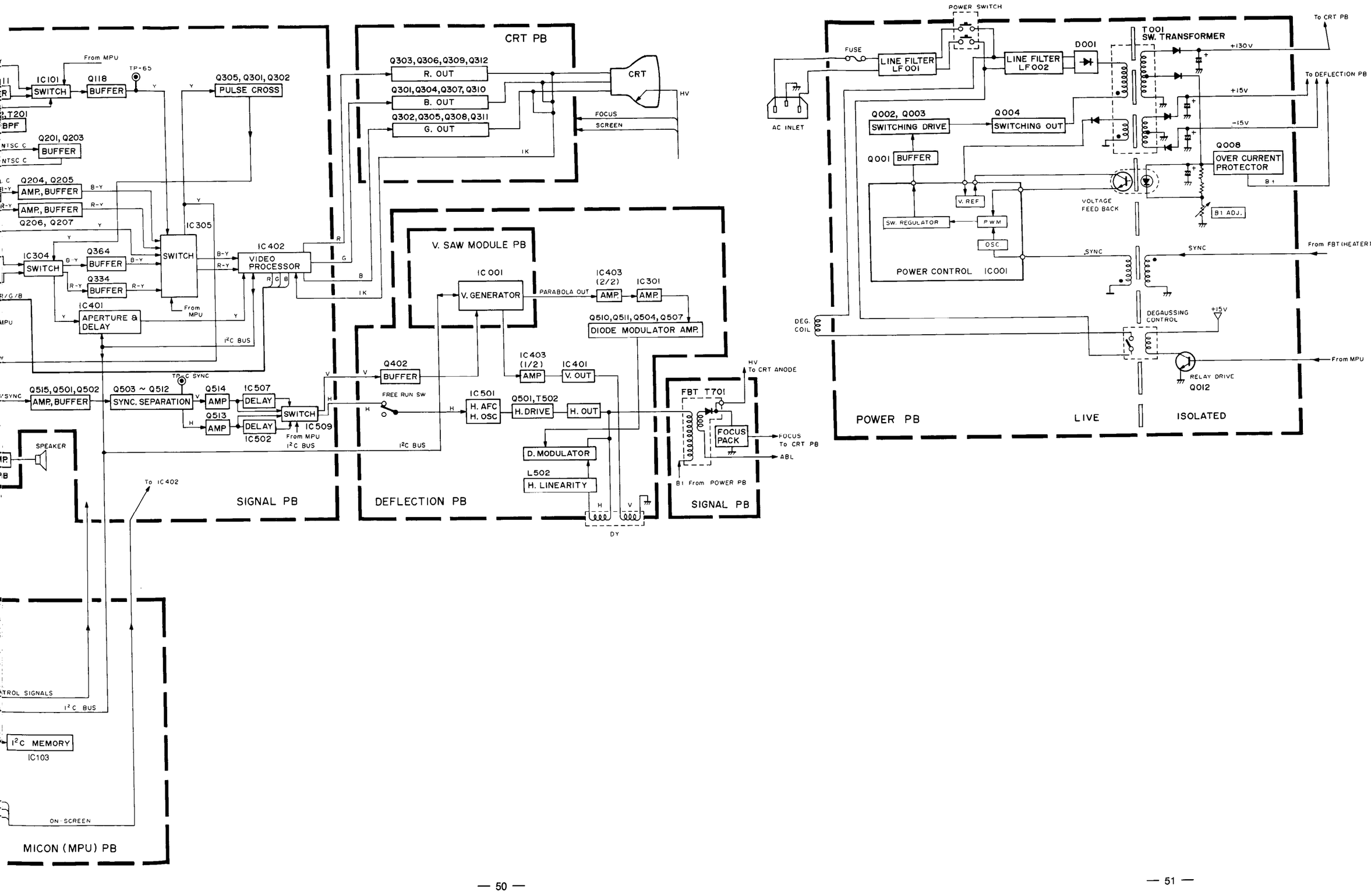


• POWER PWB (PATTERN SIDE)



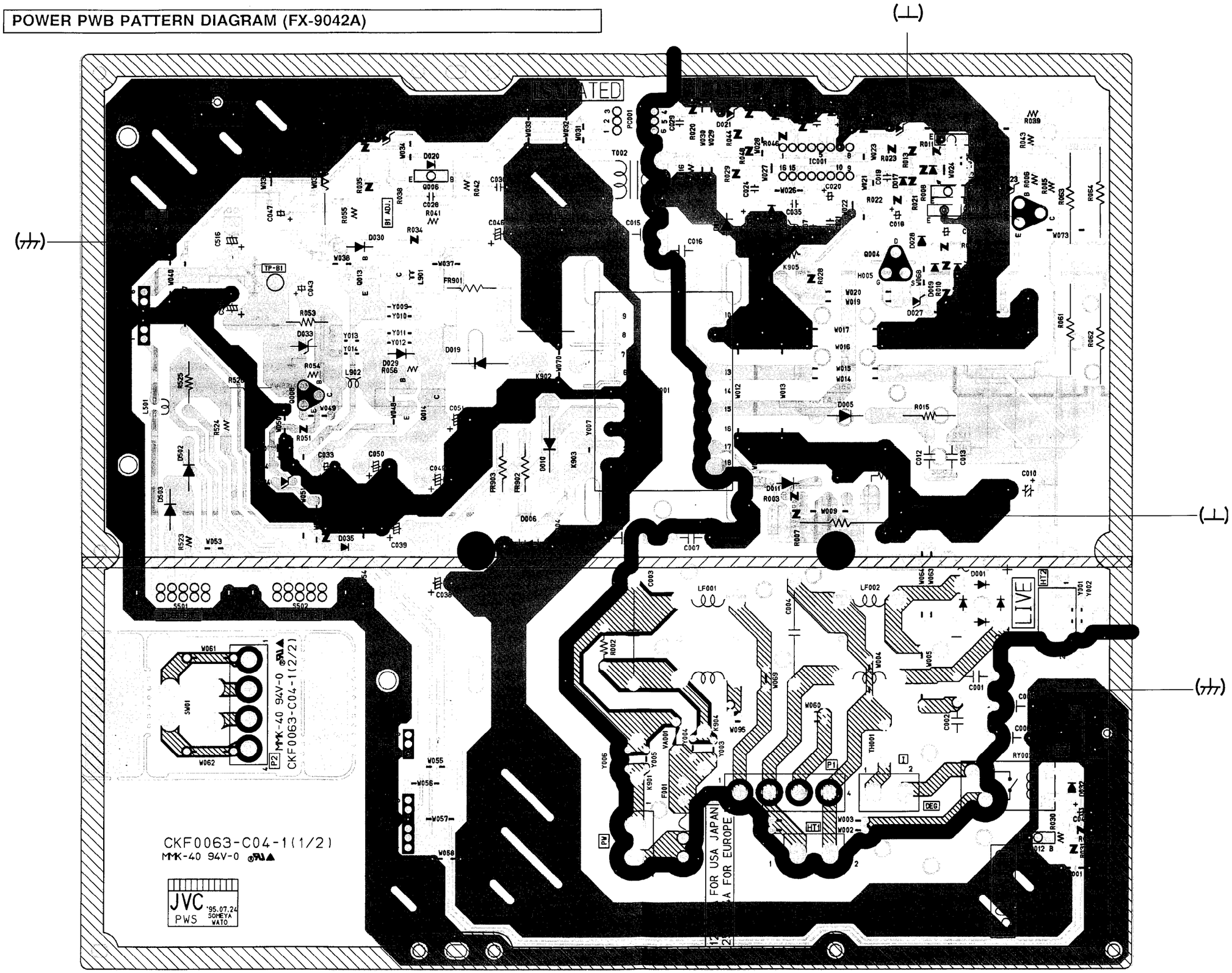
■ BLOCK DIAGRAM



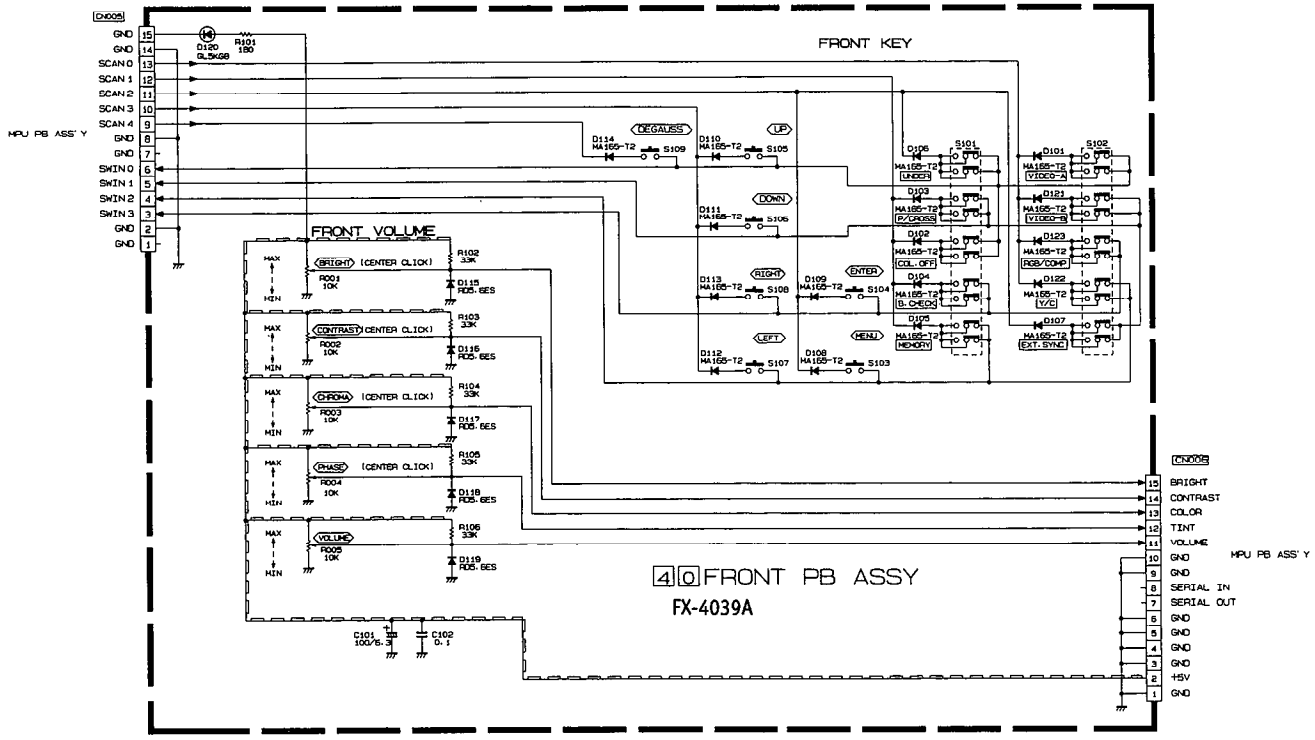

CRT PB
Q303, Q306, Q309, Q312
R. OUT
Q301, Q304, Q307, Q310
B. OUT
Q302, Q305, Q308, Q311
G. OUT
CRT
HV
FOCUS
SCREEN
1K
From MPU
IC101
SWITCH
Q118
BUFFER
TP-65
Q305, Q301, Q302
PULSE CROSS
T201
BPF
Q201, Q203
BUFFER
Q204, Q205
AMP, BUFFER
Q206, Q207
IC305
SWITCH
IC304
SWITCH
Q364
BUFFER
Q334
BUFFER
IC402
VIDEO PROCESSOR
IC401
APERTURE & DELAY
From MPU
I²C BUS
V. SAW MODULE PB
IC 001
V. GENERATOR
PARABOLA OUT
IC403 (2/2)
AMP.
IC301
AMP.
Q510, Q511, Q504, Q507
DIODE MODULATOR AMP.
Q402
BUFFER
IC403 (1/2)
AMP
IC401
V. OUT
IC501
H. AFC
H. OSC
Q501, T502
H. DRIVE
H. OUT
D. MODULATOR
L502
H. LINEARITY
DY
HV
To CRT ANODE
FBT T701
FOCUS PACK
FOCUS
To CRT PB
ABL
B1 From POWER PB
Q515, Q501, Q502
AMP, BUFFER
Q503 ~ Q512
SYNC. SEPARATION
TP-C SYNC
Q514
AMP
Q513
AMP
IC507
DELAY
IC502
DELAY
SWITCH
IC509
From MPU
I²C BUS
FREE RUN SW
SPEAKER
To IC402
SIGNAL PB
DEFLECTION PB
SIGNAL PB
TROL SIGNALS
I²C BUS
I²C MEMORY
IC103
ON-SCREEN
MICON (MPU) PB
POWER SWITCH
FUSE
AC INLET
LINE FILTER LF001
LINE FILTER LF002
D001
T001
SW. TRANSFORMER
+130V
+15V
-15V
To CRT PB
To DEFLECTION PB
Q002, Q003
SWITCHING DRIVE
Q004
SWITCHING OUT
Q001
BUFFER
Q008
OVER CURRENT PROTECTOR
B1
B1 ADJ.
V. REF
VOLTAGE FEED BACK
SW. REGULATOR
P.W.M
OSC
POWER CONTROL IC001
SYNC
SYNC
From FBT (HEATER)
DEG. COIL
DEGAUSSING CONTROL
+15V
From MPU
RELAY DRIVE
Q012
POWER PB
LIVE
ISOLATED

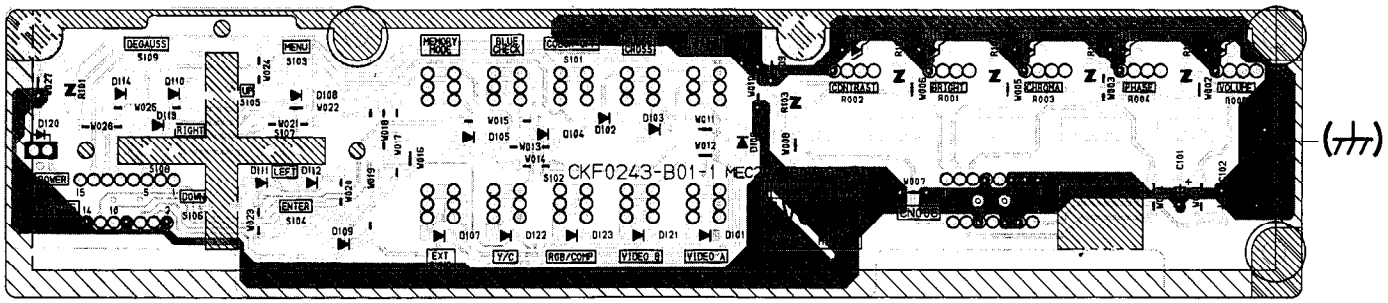
BT-M2090Y

POWER PWB PATTERN DIAGRAM (FX-9042A)

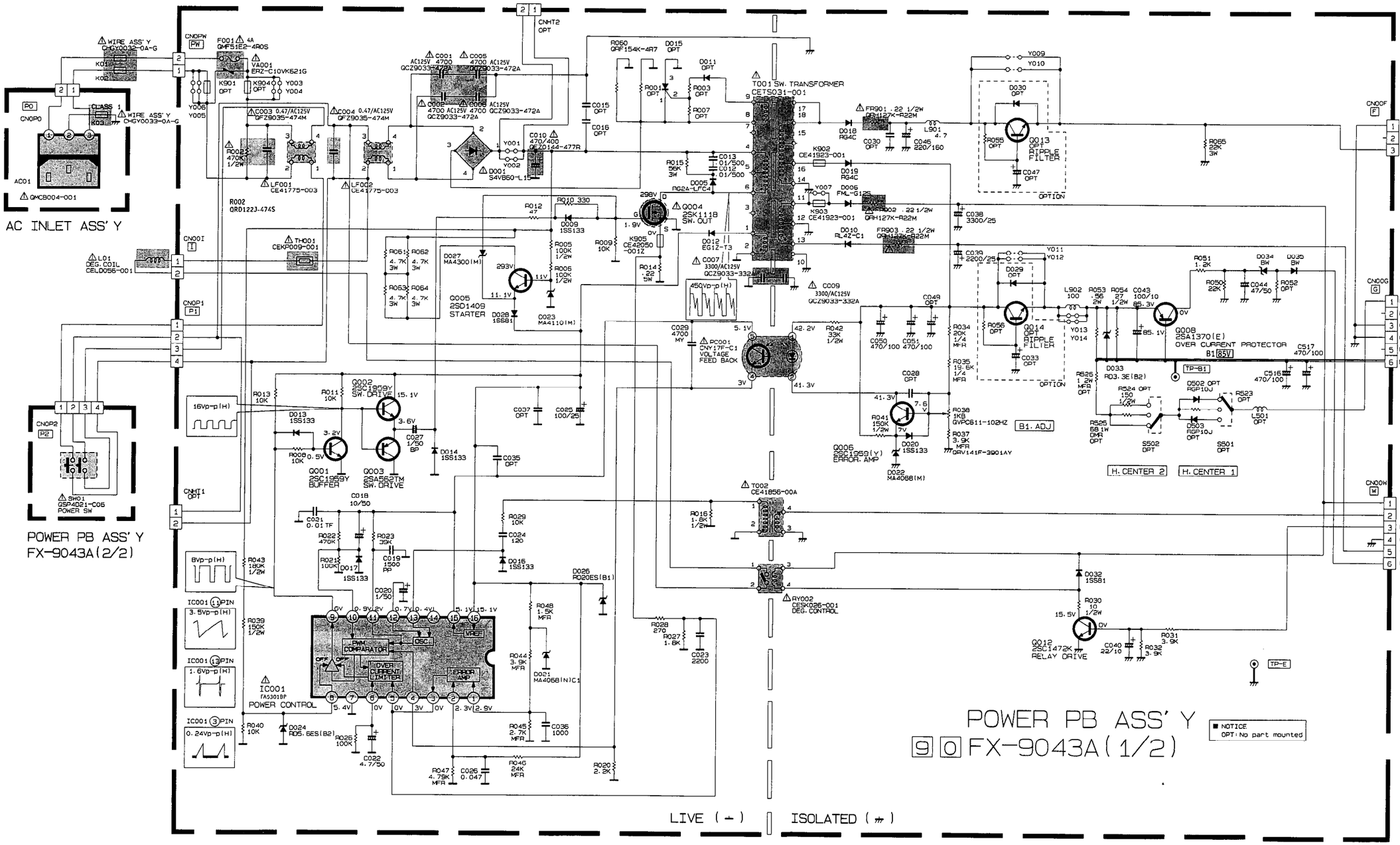


FRONT CONTROL PWB CIRCUIT DIAGRAM / PATTERN DIAGRAM (FX-4039A)

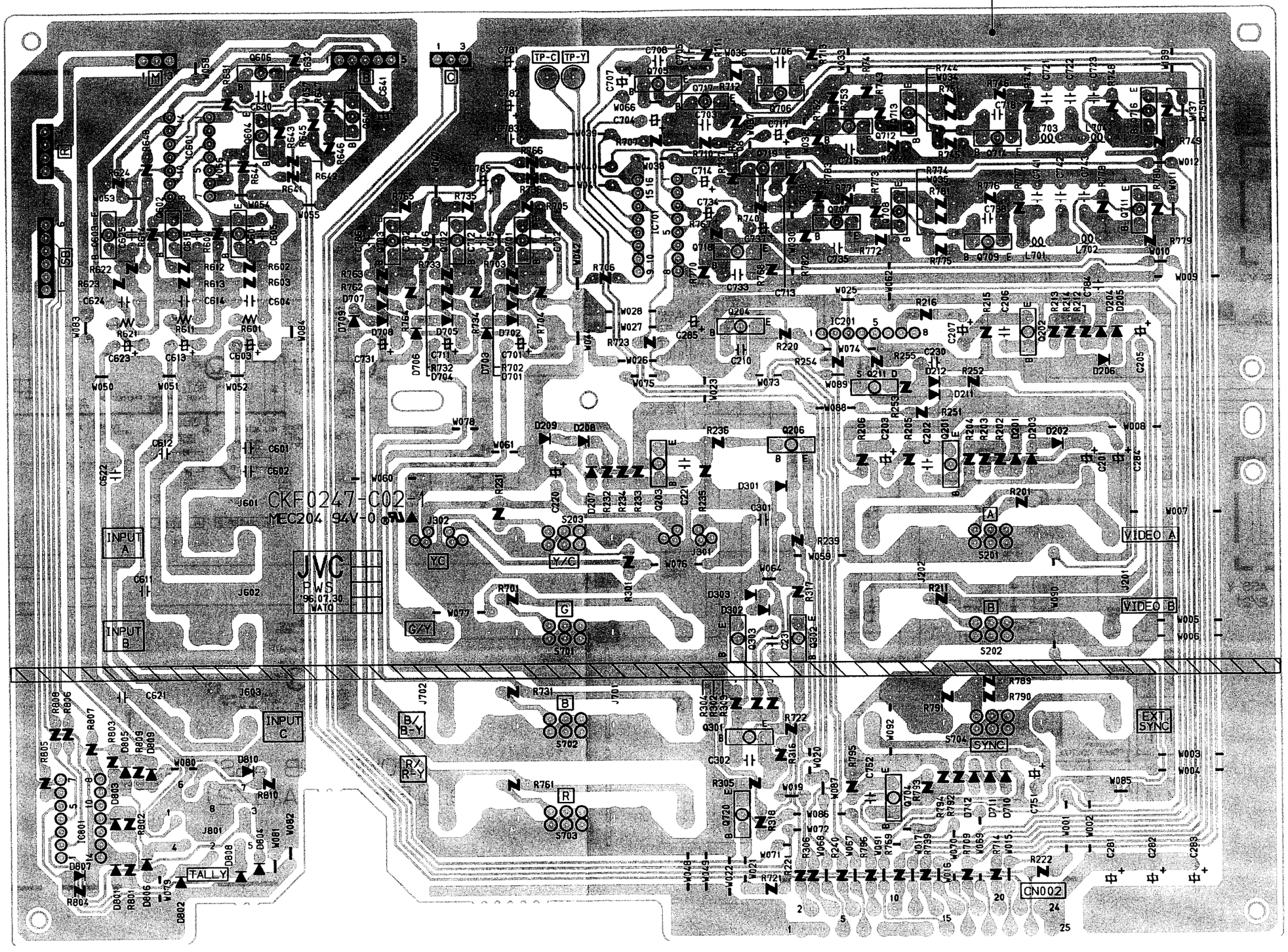




POWER PWB CIRCUIT DIAGRAM



INPUT PWB PATTERN DIAGRAM (FX-6047A)



INPUT PWB CIRCUIT DIAGRAM

■ Notice
*1 :1SS133
*2 :MA29W(B)
*3 :2SC1740S(R)
BW :BUS WIRE
OPT :NON MOUNT(OPEN)

IC201 LA7016 VIDEO A/B SWITCH

IC701 TC40538P RGB/COMP SWITCH

IC501 TC4066BP AUDIO SWITCH

IC801 HD74LS04P INVERTER

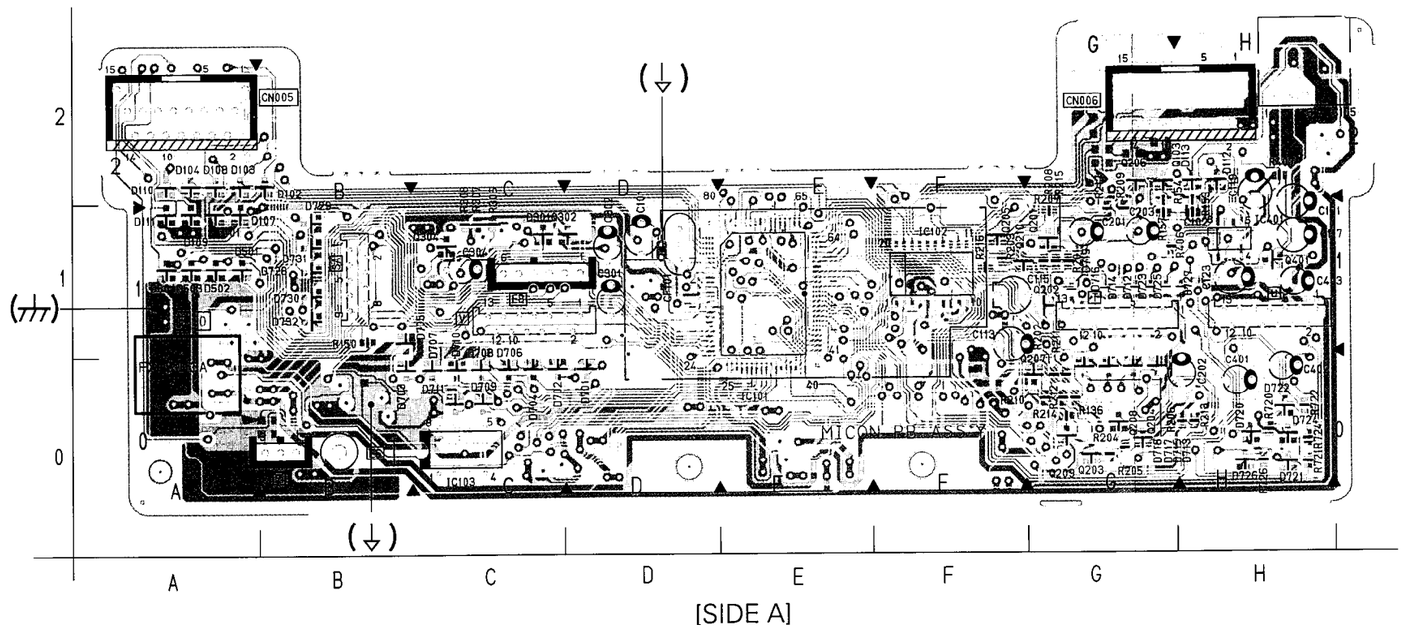
VIDEO A
VIDEO B
Y/C OUT
Y/C IN
G/Y
B/B-Y
R/R-Y
SYNC
AUDIO A (for VIDEOA)
AUDIO B (for VIDEOB & Y/C)
AUDIO C (for RGB/ Component)

VIDEO/YC
VIDEO
YC/C
YC/Y
VIDEO A/B CTL
SYNC
COMP RGB CTL
AUDIO A/B CTL
AUDIO AB/C CTL

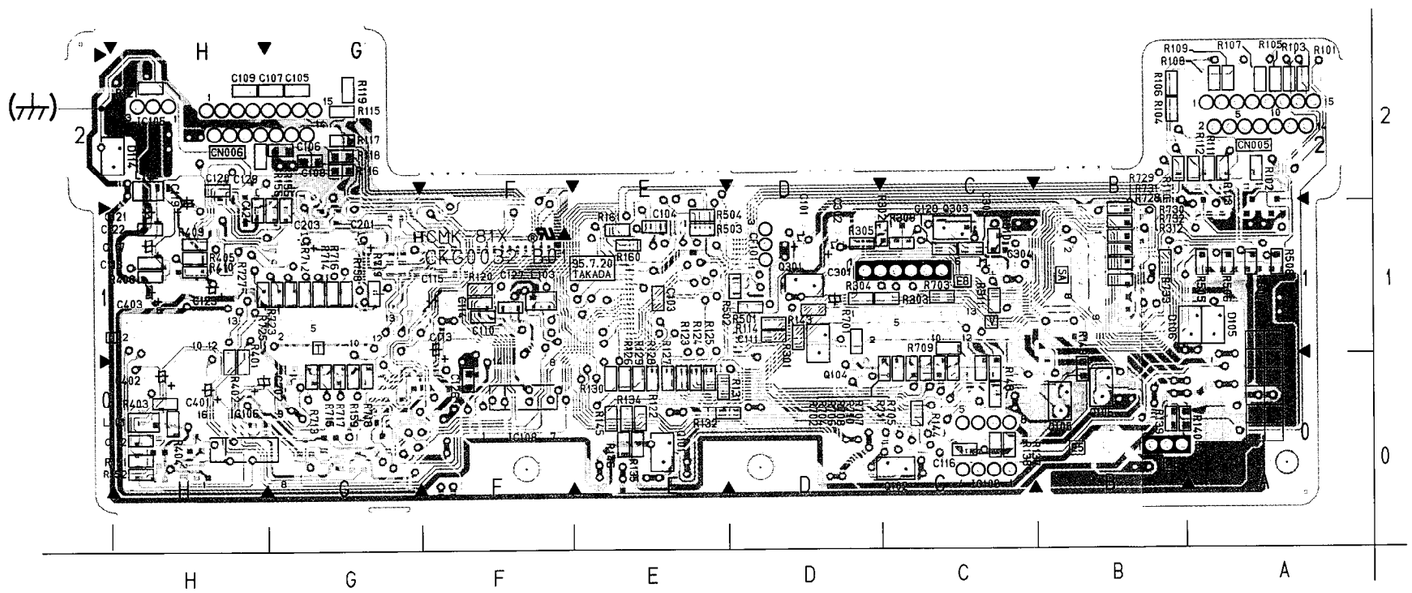
CN002 → SIGNAL PWB ASS'Y
CN003 (for factory adj)
CN008 → SIGNAL PWB ASS'Y
CN009 → TALLY PWB ASS'Y (DEF PWB ASS'Y)
CN004 → DEF PWB ASS'Y
CN058 → MICON(INPUT PB ASS'Y)

60 INPUT PB ASS'Y
FX-6053A

MICOM (MPU) PWB PATTERN DIAGRAM (FX-5015A)



[SIDE A]



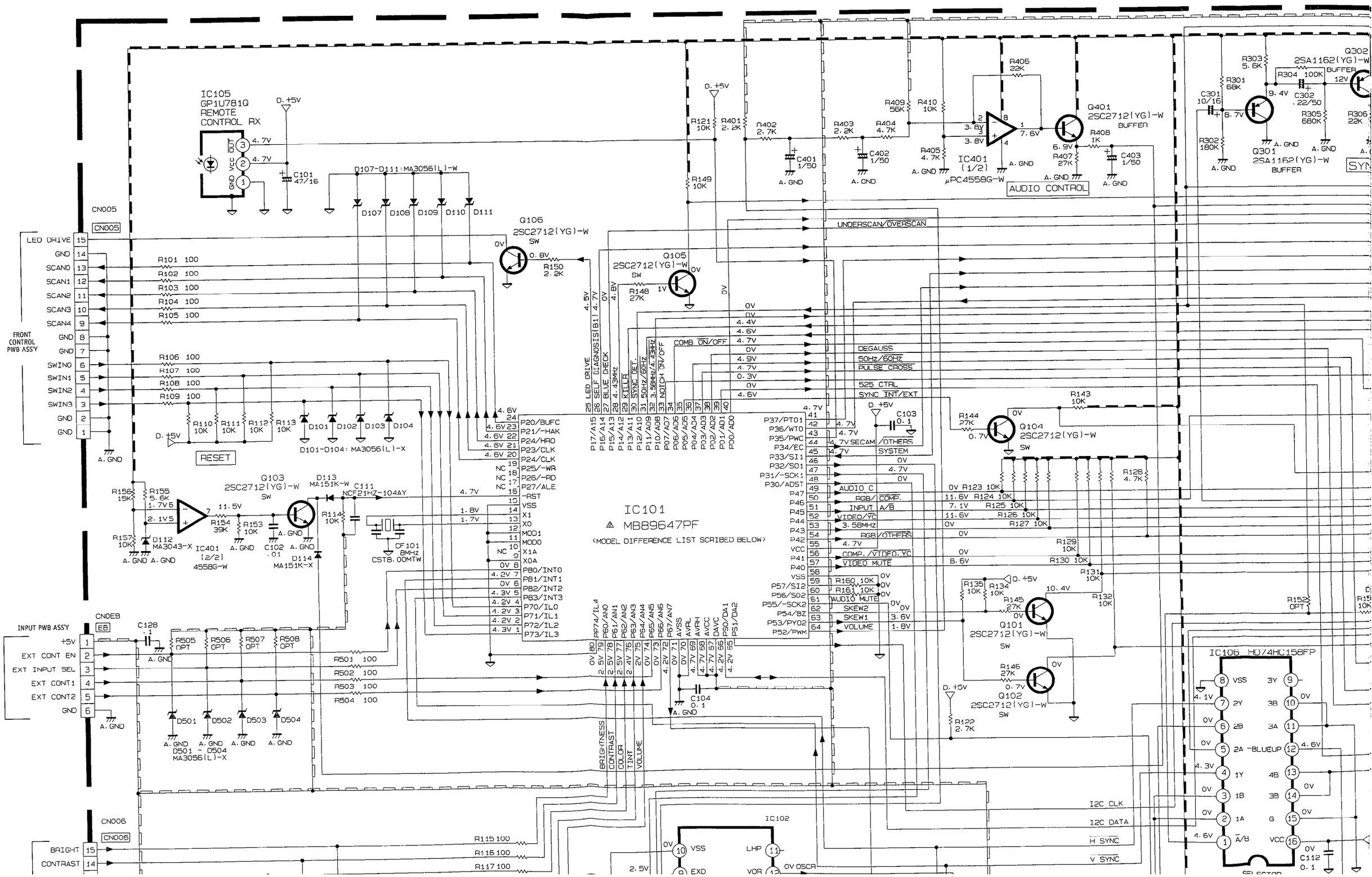
[SIDE B]

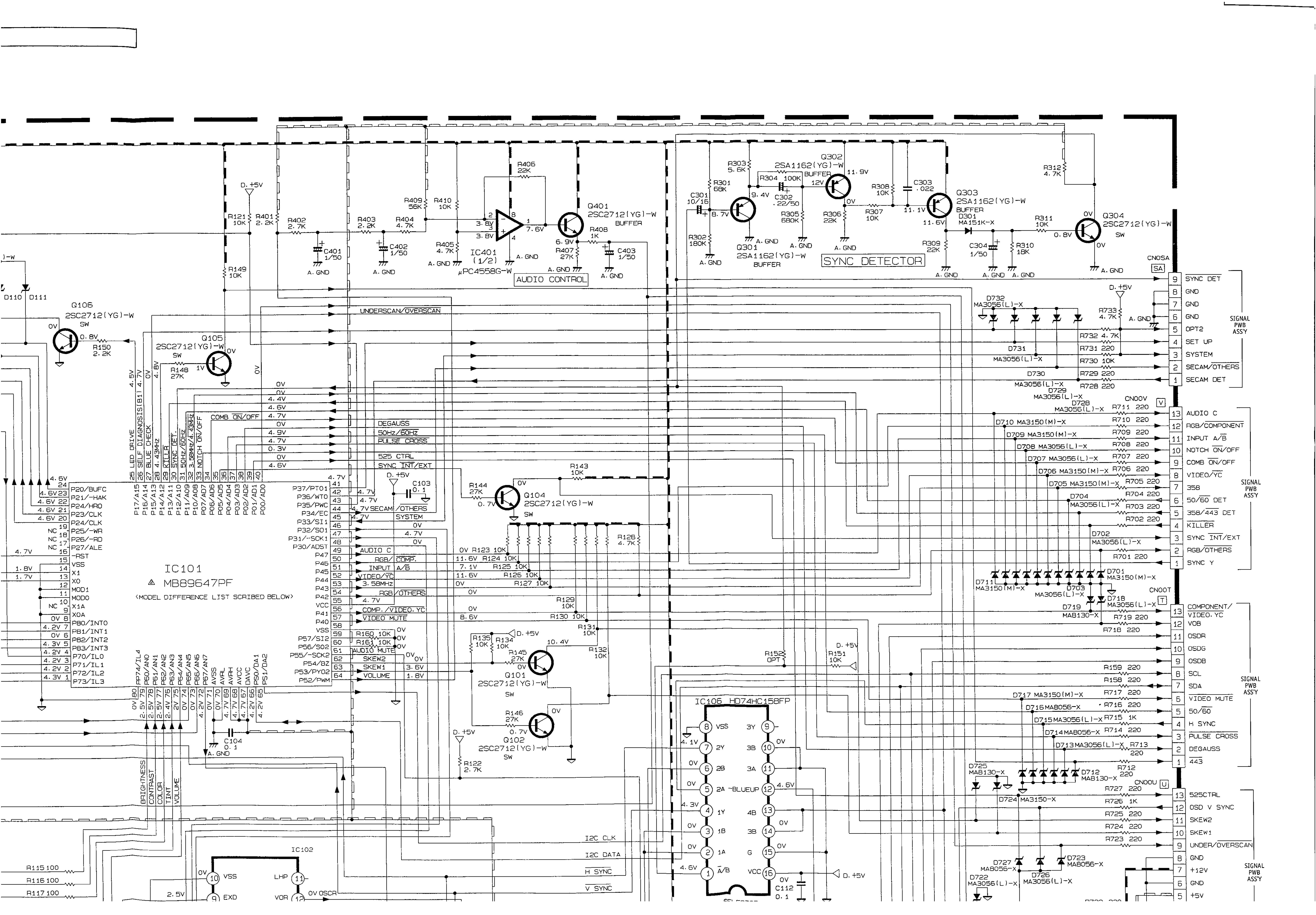
■ ADDRESS TABLE

SYMBOL No.	ADDRESS	SIDE
C102	H1	A
C103	E1	B
C104	E1	B
C105	G2	B
C106	G2	B
C107	G2	B
C108	G2	B
C109	H2	B
C110	F1	B
C111	D1	B
C112	H0	B
C114	F1	B
C116	C0	B
C118	H1	B
C120	H2	B
C122	H1	B
C124	H1	B
C126	F0	B
C127	F1	B
C128	C1	B
C129	H2	B
C303	C1	B
D101	A1	A
D102	B2	A
D103	A2	A
D104	A2	A
D105	A1	B
D106	A1	B
D107	A1	A
D108	A2	A
D109	A1	A
D110	A2	A
D111	A1	A
D112	H2	A
D113	H2	A
D114	H2	B
D301	C1	A
D501	A1	A
D502	A1	A
D503	A1	A
D504	A1	A
D701	D0	A
D702	C0	A
D703	B0	A
D704	C0	A
D705	B1	A
D706	C0	A
D707	C0	A
D708	C0	A
D709	C0	A
D710	C0	A
D711	C0	A
D712	G1	A
D713	G0	A
D714	G1	A
D715	G0	A
D716	G1	A
D717	G0	A
D718	G0	A
D719	G1	A
D720	H0	A
D721	H0	A
D722	H0	A
D723	G1	A
D724	H0	A
D725	G1	A
D726	H0	A
D727	H1	A
D728	B1	A
D729	B1	A
D730	B1	A
D731	B1	A
D732	B1	A
IC101	E1	A
IC102	F1	A
IC106	H0	B
IC108	F0	B
IC401	H1	A
L101	H0	B
L102	H2	B
L103	F1	B
Q101	E0	B
Q102	C0	B
Q103	G2	A
Q104	D1	B
Q105	B0	B
Q106	B0	B
Q201	G1	A
Q202	G1	A
Q203	G0	A
Q204	G0	A
Q205	F1	A
Q206	G2	A
Q207	G0	A
Q208	G0	A
Q209	G0	A
Q210	F1	A
Q301	D1	B
Q302	D1	A
Q303	C1	B
Q304	C1	A
Q401	H1	A
R101	A2	B
R102	A2	B
R103	A2	B
R104	B2	B
R105	A2	B
R106	B2	B
R107	A2	B
R108	A2	B
R109	A2	B
R110	B2	B
R111	A2	B
R112	A2	B
R113	A2	B
R114	D1	B
R115	G2	B
R116	G2	B
R117	G2	B
R118	G2	B
R119	G2	B
R120	F1	B
R121	H2	B
R122	E0	B
R123	E0	B
R124	E0	B
R125	E0	B
R126	E0	B
R127	E0	B
R128	E0	B
R129	E0	B
R130	E0	B
R131	E0	B
R132	E0	B
R134	E0	B
R135	E0	B
R136	G0	A
R137	C0	B
R138	C0	B
R139	B0	B
R140	B0	B
R143	D1	B
R144	C0	B
R145	E0	B
R146	E0	B
R148	C0	B
R149	B0	B
R150	B1	A
R151	H0	B
R152	H0	B
R153	H1	A
R154	G1	A
R155	G1	B
R156	G1	B
R157	G1	A
R158	G1	B
R159	G0	B
R160	E1	B
R161	E1	B
R201	G1	A
R202	G0	A
R203	F1	A
R204	G0	A
R205	G0	A
R206	H0	A
R207	G1	A
R208	G1	A
R209	G1	A
R210	G0	A
R211	G0	A
R212	G0	A
R213	H0	A
R214	G0	A
R215	G1	A
R216	F1	A
R217	G1	A
R301	D1	B
R302	C1	B
R303	C1	B
R304	D1	B
R305	D1	B
R306	C1	A
R307	C1	A
R308	C1	A
R309	C1	B
R310	C1	B
R311	C1	B
R312	B1	B
R401	H0	B
R402	H0	B
R403	H0	B
R404	H0	B
R405	H1	B
R406	G1	A
R407	H2	A
R408	H1	B
R409	H1	B
R410	H1	B
R501	D1	B
R502	D1	B
R503	E1	B
R504	E1	B
R505	A1	B
R506	A1	B
R507	A1	B
R508	A1	B
R701	D1	B
R702	C0	B
R703	C1	B
R704	C0	B
R705	C0	B
R706	C0	B
R707	C0	B
R708	C0	B
R709	C1	B
R710	C0	B
R711	C0	B
R712	G1	B
R713	G0	B
R714	G1	B
R715	G0	B
R716	G1	B
R717	G0	B
R718	G0	B
R719	G1	B
R720	H0	A
R721	H0	A
R722	H0	A
R723	G1	B
R724	H0	A
R725	G1	B
R726	H0	A
R727	H1	B
R728	B1	B
R729	B1	B
R730	B1	B
R731	B1	B
R732	B1	B
R733	B1	B

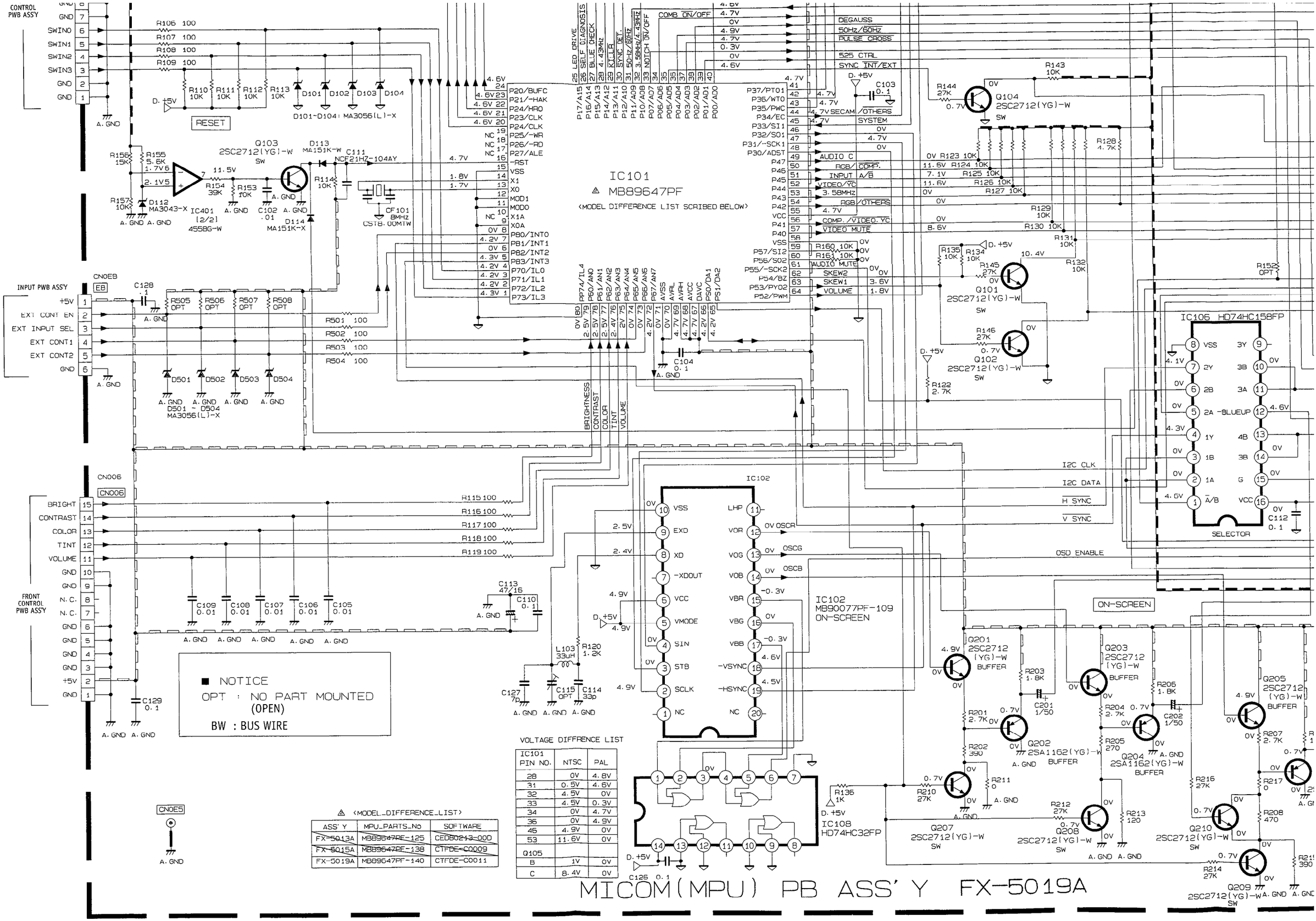
※This table shows only chip components

MICOM (MPU) PWB CIRCUIT DIAGRAM





AUDIO CONTROL
SYNC DETECTOR
IC101
MB89647PF
(MODEL DIFFERENCE LIST SCRIBED BELOW)
IC401 (1/2)
μPC4558G-W
IC106 HD74HC158FP
IC102
Q101 2SC2712(YG)-W SW
Q102 2SC2712(YG)-W SW
Q104 2SC2712(YG)-W SW
Q105 2SC2712(YG)-W SW
Q106 2SC2712(YG)-W SW
Q301 2SA1162(YG)-W BUFFER
Q302 2SA1162(YG)-W BUFFER
Q303 2SA1162(YG)-W BUFFER
Q304 2SC2712(YG)-W SW
Q401 2SC2712(YG)-W BUFFER
CN0SA
SYNC DET
GND
GND
GND
OPT2
SET UP
SYSTEM
SECAM/OTHERS
SECAM DET
SIGNAL PWB ASS'Y
CN00V
AUDIO C
RGB/COMPONENT
INPUT A/B
NOTCH ON/OFF
COMB ON/OFF
VIDEO/YC
358
50/60 DET
358/443 DET
KILLER
SYNC INT/EXT
RGB/OTHERS
SYNC Y
SIGNAL PWB ASS'Y
CN00T
COMPONENT/VIDEO.YC
VOB
OSDR
OSDG
OSDB
SCL
SDA
VIDEO MUTE
50/60
H SYNC
PULSE CROSS
DEGAUSS
443
SIGNAL PWB ASS'Y
CN00U
525CTRL
OSD V SYNC
SKEW2
SKEW1
UNDER/OVERSCAN
GND
+12V
GND
+5V
SIGNAL PWB ASS'Y
UNDERSCAN/OVERSCAN
COMB ON/OFF
DEGAUSS
50Hz/60Hz
PULSE CROSS
525 CTRL
SYNC INT/EXT
SECAM/OTHERS
SYSTEM
LED DRIVE
SELF DIAGNOSIS(B1)
BLUE CHECK
4.43MHz
KILLER
SYNC DET.
50Hz/60Hz
3.58MHz/4.43MHz
NOTCH ON/OFF
AUDIO C
RGB/COMP.
INPUT A/B
VIDEO/YC
3.58MHz
RGB/OTHERS
COMP./VIDEO.YC
VIDEO MUTE
AUDIO MUTE
SKEW2
SKEW1
VOLUME
BRIGHTNESS
CONTRAST
COLOR
TINT
VOLUME
I2C CLK
I2C DATA
H SYNC
V SYNC



IC101 PIN NO.	NTSC	PAL
28	0V	4.8V
31	0.5V	4.6V
32	4.5V	0V
33	4.5V	0.3V
34	0V	4.7V
36	0V	4.9V
46	4.9V	0V
53	11.6V	0V
Q105		
B	1V	0V
C	8.4V	0V

ASS'Y	MPU_PARTS_No	SOFTWARE
~~FX-5013A~~	~~MB89647RE-125~~	~~CED80213-Q0D~~
~~FX-5015A~~	~~MB89647RE-138~~	~~CTFDE-C0009~~
FX-5019A	MB89647PF-140	CTFDE-C0011

MICOM (MPU) PB ASS'Y FX-5019A

IC101
MB89647PF
<MODEL DIFFERENCE LIST SCRIBED BELOW>

IC102
MB90077PF-109
ON-SCREEN

IC103
ST24BM-1400
EEPROM-0100/6.3
<DATA:IS103:CTFDE-A0008>

IC106 HD74HC158FP
SELECTOR

IC108
HD74HC32FP

ST24C02AB1

VOLTAGE DIFFRENCE LIST

IC101 PIN NO.	NTSC	PAL
28	0V	4.8V
31	0.5V	4.6V
32	4.5V	0V
33	4.5V	0.3V
34	0V	4.7V
35	0V	4.9V
46	4.9V	0V
53	11.6V	0V
Q105		
B	1V	0V
C	8.4V	0V

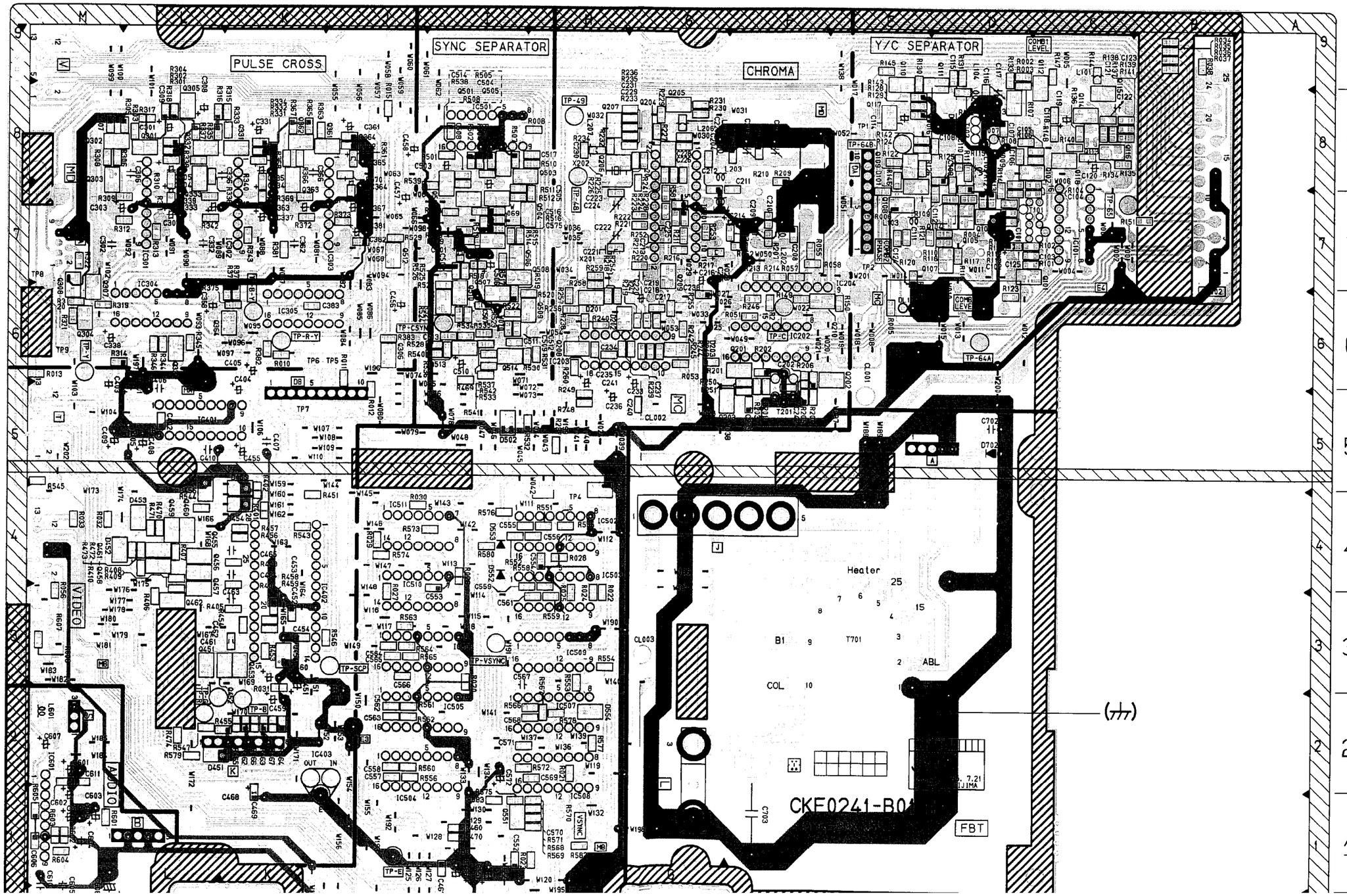
<CE_LIST>

SOFTWARE
CED80213-000
CTFDE-C0009
CTFDE-C0011

SIGNAL PWB ASS'Y

BT-M2090Y BT-M2090Y

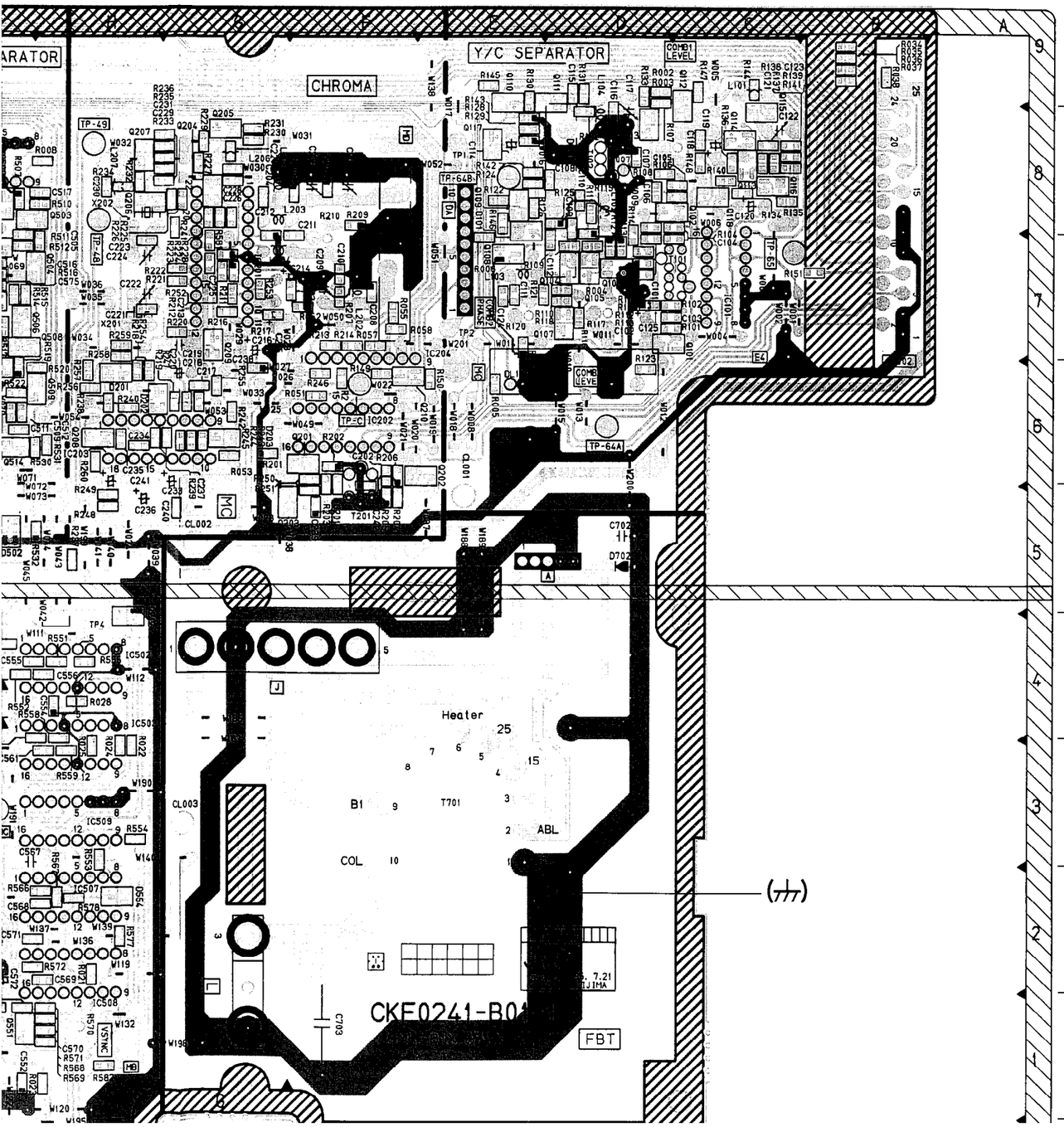
SIGNAL PWB PATTERN DIAGRAM (FX-1072A)



■ ADDRESS TABLE

SYMBOL No.	ADDRESS	SIDE
C102	D7	B
C103	D7	B
C104	C8	B
C105	C8	B
C106	D8	B
C107	D8	B
C108	D8	B
C109	D8	B
C110	D8	B
C111	E7	B
C112	D7	B
C113	D7	B
C115	D9	B
C116	D9	B
C118	C8	B
C121	C8	B
C123	C8	B
C124	E7	B
C125	D7	B
C201	F6	B
C202	F6	B
C203	F7	B
C204	G8	B
C205	F8	B
C208	F7	B
C210	F7	B
C211	F8	B
C212	G8	B
C213	G7	B
C217	G6	B
C220	G6	B
C221	H7	B
C223	H7	B
C225	G7	B
C226	G8	B
C227	G8	B
C228	G8	B
C229	G8	B
C230	H8	B
C231	G8	B
C234	H6	B
C235	H6	B
C237	G6	B
C238	G6	B
C239	F5	B
C240	G5	B
C242	F6	B
C309	L8	B
C382	J7	B
C383	K6	B
C402	L5	B
C452	K3	B
C453	K3	B
C454	K3	B
C462	K3	B
C467	I1	B
C469	K2	B
C470	I1	B
C502	I7	B
C505	H7	B
C508	I8	B
C509	I6	B
C511	I6	B
C512	I6	B
C513	I6	B
C514	I8	B
C516	I7	B
C517	H8	B
C552	I1	B
C553	I4	B
C554	H4	B
C555	I4	B
C556	H4	B
C557	J2	B
C558	J2	B
C559	H4	B
C561	H3	B
C562	J2	B
C563	J2	B

SYMBOL No.	ADDRESS
C569	H2
C570	H1
C571	I2
C575	I7
C602	M2
C606	M1
C611	M2
D101	E8
D201	H6
D202	H6
D203	G6
D451	L2
D452	M4
D453	L4
D454	K4
D455	K5
D456	L5
D501	I7
D502	I5
D554	H2
Q101	D7
Q102	D8
Q103	D8
Q104	D7
Q105	D7
Q106	D7
Q107	D7
Q108	E7
Q109	E8
Q110	E9
Q111	D9
Q112	C9
Q113	C8
Q114	C8
Q115	C9
Q116	C8
Q117	E8
Q118	C8
Q201	F6
Q202	E6
Q203	G5
Q204	G8
Q205	G8
Q206	H8
Q207	H8
Q208	H6
Q209	G7
Q210	F6
Q212	H5
Q301	L8
Q302	M8
Q303	M8
Q304	M6
Q305	L8
Q306	J6
Q307	M7
Q308	M7
Q331	K8
Q332	L8
Q333	L8
Q334	L6
Q361	J8
Q362	K8
Q363	K8
Q364	K6
Q451	L3
Q452	K3
Q453	K3
Q454	K3
Q455	L4
Q456	L4
Q457	L4
Q458	L4
Q459	L4
Q460	L4
Q461	L4
Q462	L3
Q501	I7
Q502	I8



■ ADDRESS TABLE

SYMBOL No.	ADDRESS	SIDE
C102	D7	B
C103	D7	B
C104	C8	B
C105	C8	B
C106	D8	B
C107	D8	B
C108	D8	B
C109	D8	B
C110	D8	B
C111	E7	B
C112	D7	B
C113	D7	B
C115	D9	B
C116	D9	B
C118	C8	B
C121	C8	B
C123	C8	B
C124	E7	B
C125	D7	B
C201	F6	B
C202	F6	B
C203	F7	B
C204	G8	B
C205	F8	B
C208	F7	B
C210	F7	B
C211	F8	B
C212	G8	B
C213	G7	B
C217	G6	B
C220	G6	B
C221	H7	B
C223	H7	B
C225	G7	B
C226	G8	B
C227	G8	B
C228	G8	B
C229	G8	B
C230	H8	B
C231	G8	B
C234	H6	B
C235	H6	B
C237	G6	B
C238	G6	B
C239	F5	B
C240	G5	B
C242	F6	B
C309	L8	B
C382	J7	B
C383	K6	B
C402	L5	B
C452	K3	B
C453	K3	B
C454	K3	B
C462	K3	B
C467	I1	B
C469	K2	B
C470	I1	B
C502	I7	B
C505	H7	B
C508	I8	B
C509	I6	B
C511	I6	B
C512	I6	B
C513	I6	B
C514	I8	B
C516	I7	B
C517	H8	B
C552	I1	B
C553	I4	B
C554	H4	B
C555	I4	B
C556	H4	B
C557	J2	B
C558	J2	B
C559	H4	B
C561	H3	B
C562	J2	B
C563	J2	B
C569	H2	B
C570	H1	B
C571	I2	B
C575	I7	B
C602	M2	B
C606	M1	B
C611	M2	B
D101	E8	B
D201	H6	B
D202	H6	B
D203	G6	B
D451	L2	B
D452	M4	B
D453	L4	B
D454	K4	B
D455	K5	B
D456	L5	B
D501	I7	B
D502	I5	B
D554	H2	B
Q101	D7	B
Q102	D8	B
Q103	D8	B
Q104	D7	B
Q105	D7	B
Q106	D7	B
Q107	D7	B
Q108	E7	B
Q109	E8	B
Q110	E9	B
Q111	D9	B
Q112	C9	B
Q113	C8	B
Q114	C8	B
Q115	C9	B
Q116	C8	B
Q117	E8	B
Q118	C8	B
Q201	F6	B
Q202	E6	B
Q203	G5	B
Q204	G8	B
Q205	G8	B
Q206	H8	B
Q207	H8	B
Q208	H6	B
Q209	G7	B
Q210	F6	B
Q212	H5	B
Q301	L8	B
Q302	M8	B
Q303	M8	B
Q304	M6	B
Q305	L8	B
Q306	J6	B
Q307	M7	B
Q308	M7	B
Q331	K8	B
Q332	L8	B
Q333	L8	B
Q334	L6	B
Q361	J8	B
Q362	K8	B
Q363	K8	B
Q364	K6	B
Q451	L3	B
Q452	K3	B
Q453	K3	B
Q454	K3	B
Q455	L4	B
Q456	L4	B
Q457	L4	B
Q458	L4	B
Q459	L4	B
Q460	L4	B
Q461	L4	B
Q462	L3	B
Q501	I7	B
Q502	I8	B
Q507	I6	B
Q508	I7	B
Q509	H6	B
Q510	I6	B
Q511	I6	B
Q512	J7	B
Q513	I6	B
Q514	I6	B
Q515	I8	B
Q551	I1	B
R002	D9	B
R003	D9	B
R004	D7	B
R005	E6	B
R006	E8	B
R008	H8	B
R010	K6	B
R011	J6	B
R012	J6	B
R013	M6	B
R015	J8	B
R020	I3	B
R021	H2	B
R022	H4	B
R023	H1	B
R024	H4	B
R025	H4	B
R026	I4	B
R027	J4	B
R028	H4	B
R029	J4	B
R030	J4	B
R031	K3	B
R032	M4	B
R033	M4	B
R034	B9	B
R035	B9	B
R036	B9	B
R037	B9	B
R038	B9	B
R051	F6	B
R052	F7	B
R053	G6	B
R055	F7	B
R056	M3	B
R057	F7	B
R058	F7	B
R101	D7	B
R102	D7	B
R103	D8	B
R104	C8	B
R105	D8	B
R106	C8	B
R108	D8	B
R109	D7	B
R110	D7	B
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R130	E9	B
R131	D9	B
R132	D9	B
R133	D9	B
R134	C8	B
R135	C8	B
R140	C8	B
R141	C8	B
R142	E8	B
R143	E8	B
R144	C9	B
R145	E9	B
R146	E8	B
R147	C9	B
R148	C8	B
R149	F6	B
R150	E6	B
R151	B7	B
R201	G6	B
R202	F6	B
R203	F6	B
R204	F5	B
R205	F5	B
R206	F6	B
R207	F7	B
R208	F8	B
R209	F8	B
R211	G7	B
R212	G7	B
R213	F7	B
R214	F7	B
R215	F6	B
R216	G7	B
R217	G7	B
R218	H6	B
R219	G6	B
R220	G7	B
R221	G7	B
R222	G7	B
R223	G8	B
R224	G8	B
R225	G8	B
R226	G8	B
R227	G8	B
R228	G8	B
R229	G8	B
R230	G8	B
R231	G8	B
R232	H8	B
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R234	H8	B
R235	G8	B
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R237	H5	B
R238	H6	B
R239	H6	B
R240	H6	B
R241	G8	B
R242	G6	B
R243	G6	B
R244	G6	B
R245	G6	B
R246	F6	B
R247	G6	B
R248	H5	B
R249	H5	B
R250	F6	B
R251	F6	B
R252	G7	B
R253	G7	B
R254	H6	B
R255	G6	B
R256	H6	B
R257	H6	B
R258	H7	B
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R301	L8	B
R302	L8	B
R303	L8	B
R304	L8	B
R305	L8	B
R306	M8	B
R307	M8	B
R308	M8	B
R309	L7	B
R313	L7	B
R314	M6	B
R315	K8	B
R316	L8	B
R317	L8	B
R318	L8	B
R319	M6	B
R320	M6	B
R321	M6	B
R322	M7	B
R331	K8	B
R332	K8	B
R333	K8	B
R334	K8	B
R335	L8	B
R336	L8	B
R337	L8	B
R338	L8	B
R339	L7	B
R340	K8	B
R341	K7	B
R342	L7	B
R343	K7	B
R344	L6	B
R345	L6	B
R346	L6	B
R361	J8	B
R362	J8	B
R363	K8	B
R364	J8	B
R365	K8	B
R366	K8	B
R367	K8	B
R368	K8	B
R369	K7	B
R370	J8	B
R371	J7	B
R372	K7	B
R373	J7	B
R374	K6	B
R375	K6	B
R376	K6	B
R381	K7	B
R382	K6	B
R383	J6	B
R401	K4	B
R402	K5	B
R403	K4	B
R404	K4	B
R405	K3	B
R406	L3	B
R407	L4	B
R408	L4	B
R409	L4	B
R410	L4	B
R451	K4	B
R453	K3	B
R454	K3	B
R455	K2	B
R456	K4	B
R457	K4	B
R458	K3	B
R459	K3	B
R460	I1	B
R461	I0	B
R462	K2	B
R463	K2	B
R464	K2	B
R465	K2	B
R466	K2	B
R467	K2	B
R469	I6	B
R470	L4	B
R471	L4	B
R472	L4	B
R473	L4	B
R474	L2	B
R501	I8	B
R502	I8	B
R507	I8	B
R508	I7	B
R509	I7	B
R510	H8	B
R511	I8	B
R512	I7	B
R513	I7	B
R514	I7	B
R515	I7	B
R516	I7	B
R517	I7	B
R518	I7	B
R519	I6	B
R520	H6	B
R521	I6	B
R522	I6	B
R523	I6	B
R524	I6	B
R525	I7	B
R526	I7	B
R527	I7	B
R528	I6	B
R529	J7	B
R530	I6	B
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R532	H5	B
R533	I6	B
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R551	H4	B
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R553	H3	B
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R558	H4	B
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R560	J2	B
R561	J2	B
R562	J2	B
R563	J3	B
R564	J3	B
R565	J3	B
R566	H2	B
R567	H2	B
R568	H1	B
R569	H1	B
R571	H1	B
R572	I2	B
R573	I4	B
R574	J4	B
R575	I1	B
R576	I4	B
R577	H2	B
R578	H2	B
R579	L2	B
R580	I4	B
R581	G7	B
R582	H1	B
R583	I1	B
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R602	M1	B
R603	M1	B
R604	M1	B
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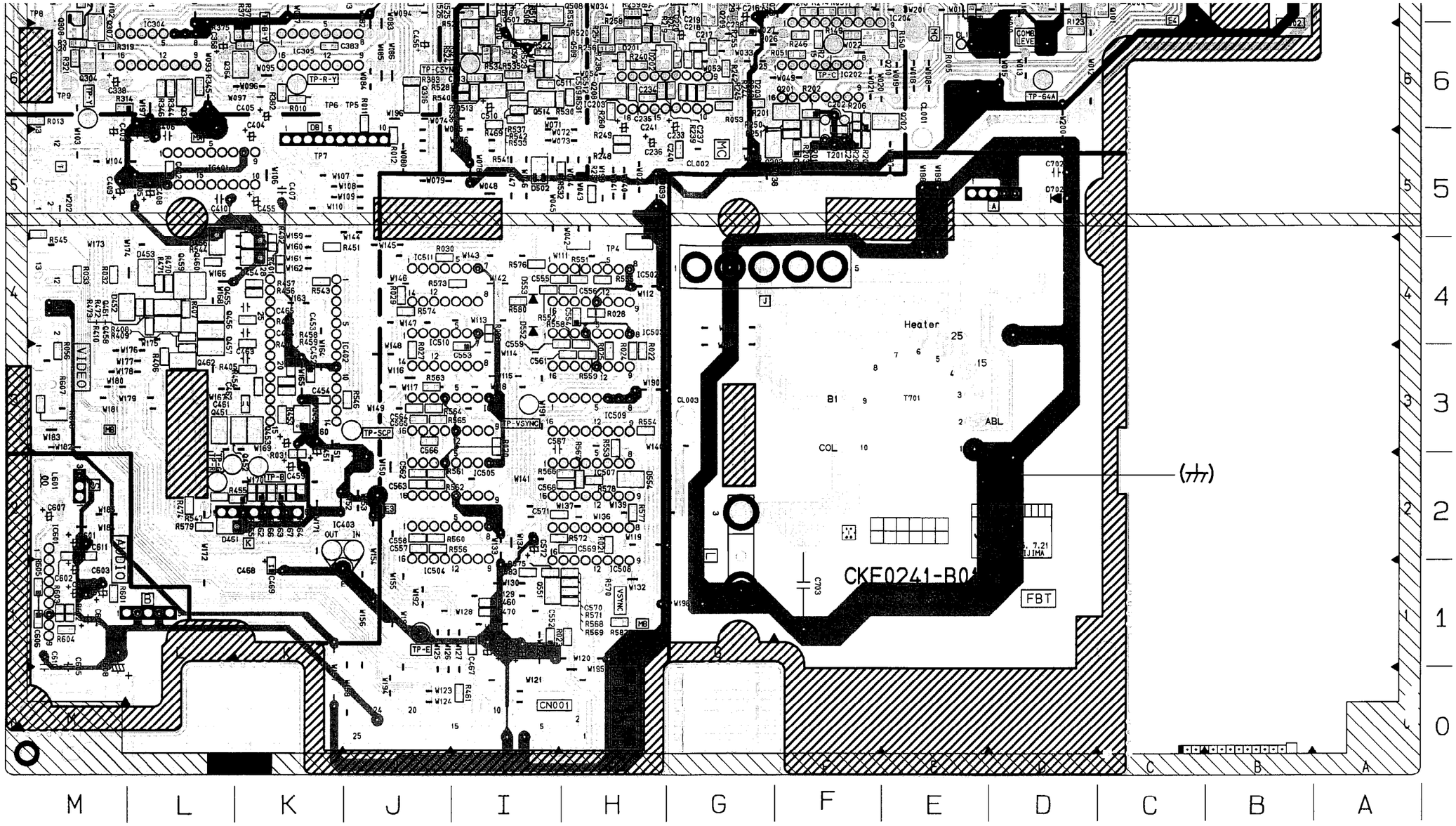
R606	M3	B



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C220	G6	B		Q111	D9		
C221	H7	B		Q112	C9		
C223	H7	B		Q113	C8		
C225	G7	B		Q114	C8		
C226	G8	B		Q115	C9		
C227	G8	B		Q116	C8		
C228	G8	B		Q117	E8		
C229	G8	B		Q118	C8		
C230	H8	B		Q201	F6		
C231	G8	B		Q202	E6		
C234	H6	B		Q203	G5		
C235	H6	B		Q204	G8		
C237	G6	B		Q205	G8		
C238	G6	B		Q206	H8		
C239	F5	B		Q207	H8		
C240	G5	B		Q208	H6		
C242	F6	B		Q209	G7		
C309	L8	B		Q210	F6		
C382	J7	B		Q212	H5		
C383	K6	B		Q301	L8		
C402	L5	B		Q302	M8		
C452	K3	B		Q303	M8		
C453	K3	B		Q304	M6		
C454	K3	B		Q305	L8		
C462	K3	B		Q306	J6		
C467	I1	B		Q307	M7		
C469	K2	B		Q308	M7		
C470	I1	B		Q331	K8		
C502	I7	B		Q332	L8		
C505	H7	B		Q333	L8		
C508	I8	B		Q334	L6		
C509	I6	B		Q361	J8		
C511	I6	B		Q362	K8		
C512	I6	B		Q363	K8		
C513	I6	B		Q364	K6		
C514	I8	B		Q451	L3		
C516	I7	B		Q452	K3		
C517	H8	B		Q453	K3		
C552	I1	B		Q454	K3		
C553	I4	B		Q455	L4		
C554	H4	B		Q456	L4		
C555	I4	B		Q457	L4		
C556	H4	B		Q458	L4		
C557	J2	B		Q459	L4		
C558	J2	B		Q460	L4		
C559	H4	B		Q461	L4		
C561	H3	B		Q462	L3		
C562	J2	B		Q501	I7		
C563	J2	B		Q502	I8		
C564	J3	B		Q503	I8		
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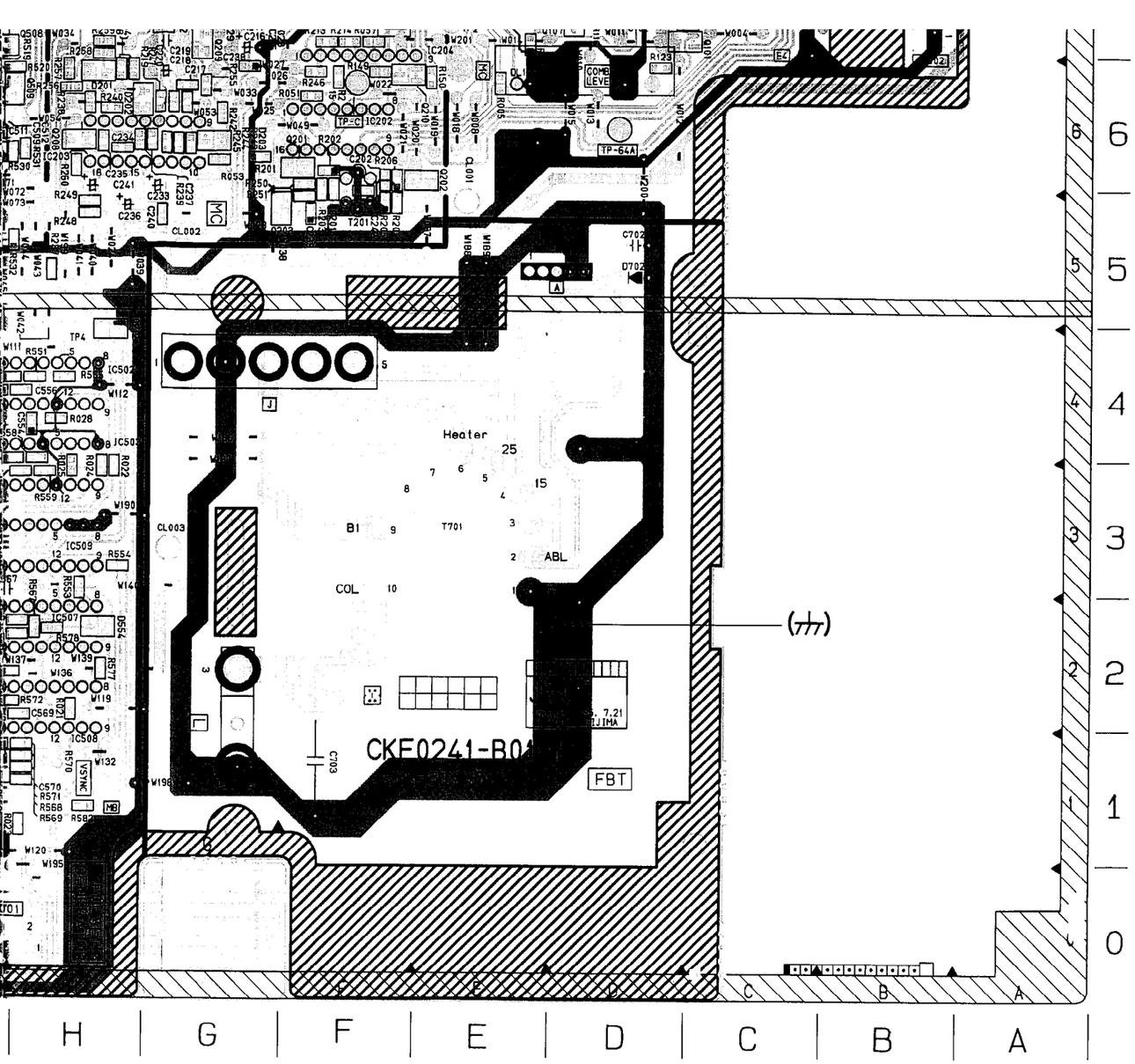

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C217	G6	B	Q110	E9	B	R028	H4	B	R219	G6	B	R364	J8	B	R536	I6	B
C220	G6	B	Q111	D9	B	R029	J4	B	R220	G7	B	R365	K8	B	R537	I6	B
C221	H7	B	Q112	C9	B	R030	J4	B	R221	G7	B	R366	K8	B	R538	I8	B
C223	H7	B	Q113	C8	B	R031	K3	B	R222	G7	B	R367	K8	B	R539	I8	B
C225	G7	B	Q114	C8	B	R032	M4	B	R223	G8	B	R368	K8	B	R540	I6	B
C226	G8	B	Q115	C9	B	R033	M4	B	R224	G8	B	R369	K7	B	R541	I6	B
C227	G8	B	Q116	C8	B	R034	B9	B	R225	G8	B	R370	J8	B	R542	I6	B
C228	G8	B	Q117	E8	B	R035	B9	B	R226	G8	B	R371	J7	B	R543	K4	B
C229	G8	B	Q118	C8	B	R036	B9	B	R227	G8	B	R372	K7	B	R544	L4	B
C230	H8	B	Q201	F6	B	R037	B9	B	R228	G8	B	R373	J7	B	R545	M5	B
C231	G8	B	Q202	E6	B	R038	B9	B	R229	G8	B	R374	K6	B	R546	J3	B
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C237	G6	B	Q205	G8	B	R053	G6	B	R232	H8	B	R381	K7	B	R551	H4	B
C238	G6	B	Q206	H8	B	R055	F7	B	R233	H8	B	R382	K6	B	R552	I4	B
C239	F5	B	Q207	H8	B	R056	M3	B	R234	H8	B	R383	J6	B	R553	H3	B
C240	G5	B	Q208	H6	B	R057	F7	B	R235	G8	B	R401	K4	B	R554	H3	B
C242	F6	B	Q209	G7	B	R058	F7	B	R236	G8	B	R402	K5	B	R555	H4	B
C309	L8	B	Q210	F6	B	R101	D7	B	R237	H5	B	R403	K4	B	R556	J2	B
C382	J7	B	Q212	H5	B	R102	D7	B	R238	H6	B	R404	K4	B	R558	H4	B
C383	K6	B	Q301	L8	B	R103	D8	B	R239	H6	B	R405	K3	B	R559	H3	B
C402	L5	B	Q302	M8	B	R104	C8	B	R240	H6	B	R406	L3	B	R560	J2	B
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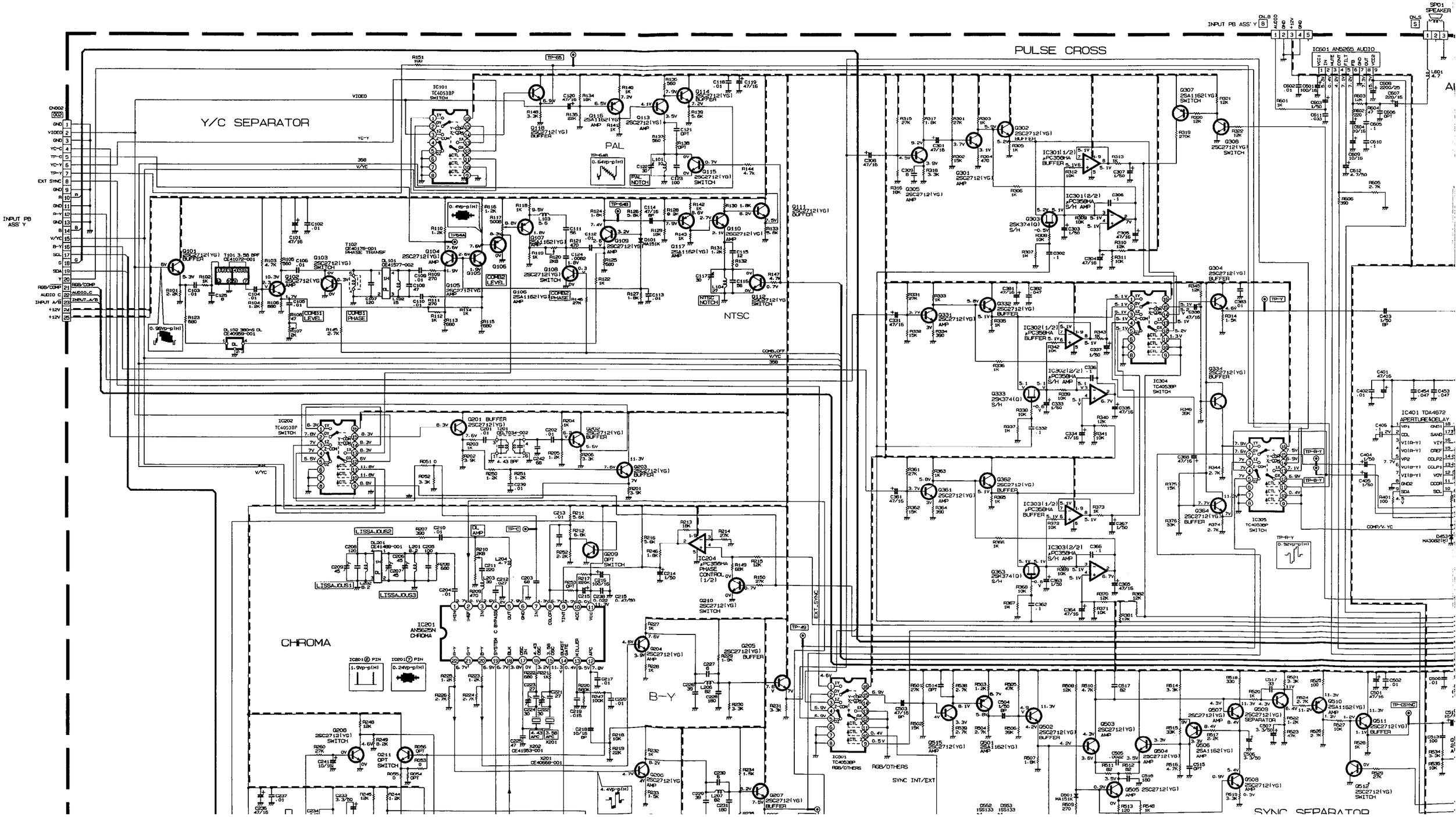
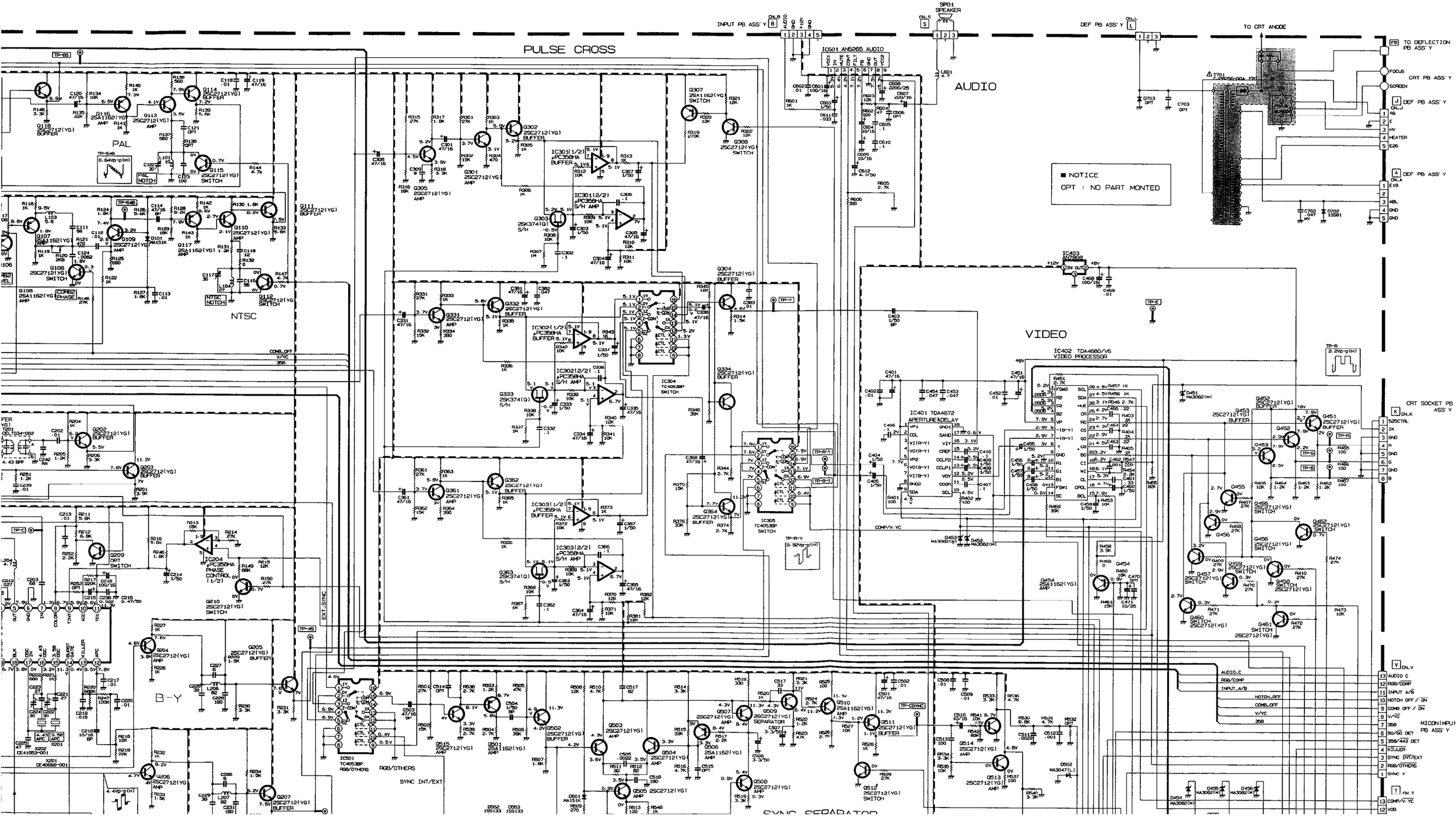
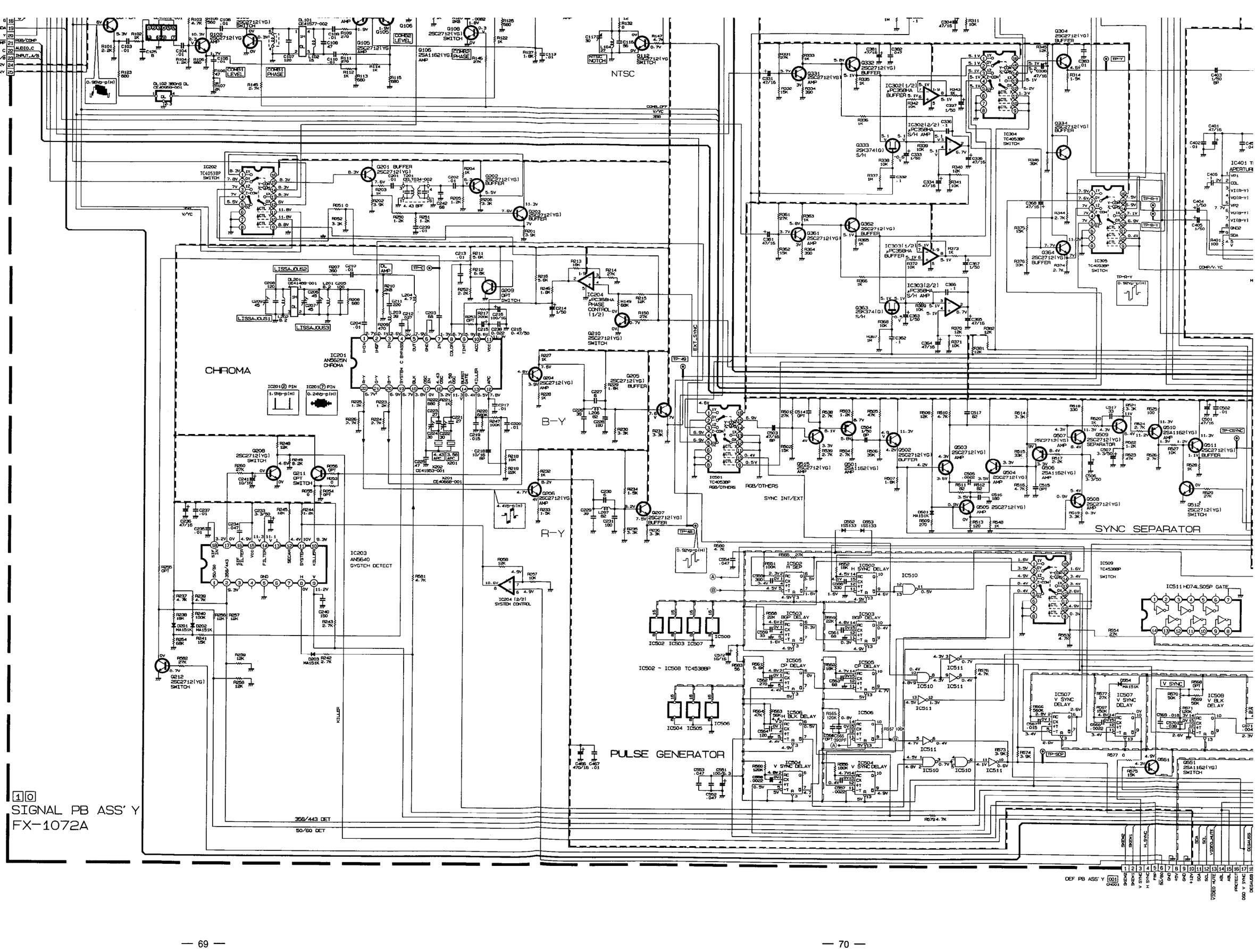
C454	K3	B	Q305	L8	B	R108	D8	B	R243	G6	B	R409	L4	B	R563	J3	B
C462	K3	B	Q306	J6	B	R109	D7	B	R244	G6	B	R410	L4	B	R564	J3	B
C467	I1	B	Q307	M7	B	R110	D7	B	R245	G6	B	R451	K4	B	R565	J3	B
C469	K2	B	Q308	M7	B	R111	D8	B	R246	F6	B	R453	K3	B	R566	H2	B
C470	I1	B	Q331	K8	B	R112	D7	B	R247	G6	B	R454	K3	B	R567	H2	B
C502	I7	B	Q332	L8	B	R113	D7	B	R248	H5	B	R455	K2	B	R568	H1	B
C505	H7	B	Q333	L8	B	R114	D8	B	R249	H5	B	R456	K4	B	R569	H1	B
C508	I8	B	Q334	L6	B	R115	D8	B	R250	F6	B	R457	K4	B	R571	H1	B
C509	I6	B	Q361	J8	B	R116	D7	B	R251	F6	B	R458	K3	B	R572	I2	B
C511	I6	B	Q362	K8	B	R118	D7	B	R252	G7	B	R459	K3	B	R573	I4	B
C512	I6	B	Q363	K8	B	R119	E7	B	R253	G7	B	R460	I1	B	R574	J4	B
C513	I6	B	Q364	K6	B	R121	E7	B	R254	H6	B	R461	I0	B	R575	I1	B
C514	I8	B	Q451	L3	B	R122	E8	B	R255	G6	B	R462	K2	B	R576	I4	B
C516	I7	B	Q452	K3	B	R123	D6	B	R256	H6	B	R463	K2	B	R577	H2	B
C517	H8	B	Q453	K3	B	R124	E8	B	R257	H6	B	R464	K2	B	R578	H2	B
C552	I1	B	Q454	K3	B	R125	D8	B	R258	H7	B	R465	K2	B	R579	L2	B
C553	I4	B	Q455	L4	B	R126	E8	B	R259	H7	B	R466	K2	B	R580	I4	B
C554	H4	B	Q456	L4	B	R127	D7	B	R260	H6	B	R467	K2	B	R581	G7	B
C555	I4	B	Q457	L4	B	R128	E8	B	R301	L8	B	R469	I6	B	R582	H1	B
C556	H4	B	Q458	L4	B	R129	E8	B	R302	L8	B	R470	L4	B	R583	I1	B
C557	J2	B	Q459	L4	B	R130	E9	B	R303	L8	B	R471	L4	B	R601	M1	B
C558	J2	B	Q460	L4	B	R131	D9	B	R304	L8	B	R472	L4	B	R602	M1	B
C559	H4	B	Q461	L4	B	R132	D9	B	R305	L8	B	R473	L4	B	R603	M1	B
C561	H3	B	Q462	L3	B	R133	D9	B	R306	M8	B	R474	L2	B	R604	M1	B
C562	J2	B	Q501	I7	B	R134	C8	B	R307	M8	B	R501	I8	B	R605	M1	B
C563	J2	B	Q502	I8	B	R135	C8	B	R308	M8	B	R502	I8	B	R606	M3	B
C564	J3	B	Q503	I8	B	R136	C8	B	R309	L7	B	R503	I7	B			
C565	J3	B	Q504	I7	B	R137	C8	B	R310	L8	B	R504	I8	B			
C566	J3	B	Q505	I7	B	R138	C8	B	R311	L7	B	R505	I8	B			
C568	H2	B	Q506	I7	B	R139	C8	B	R312	L7	B	R506	I8	B			

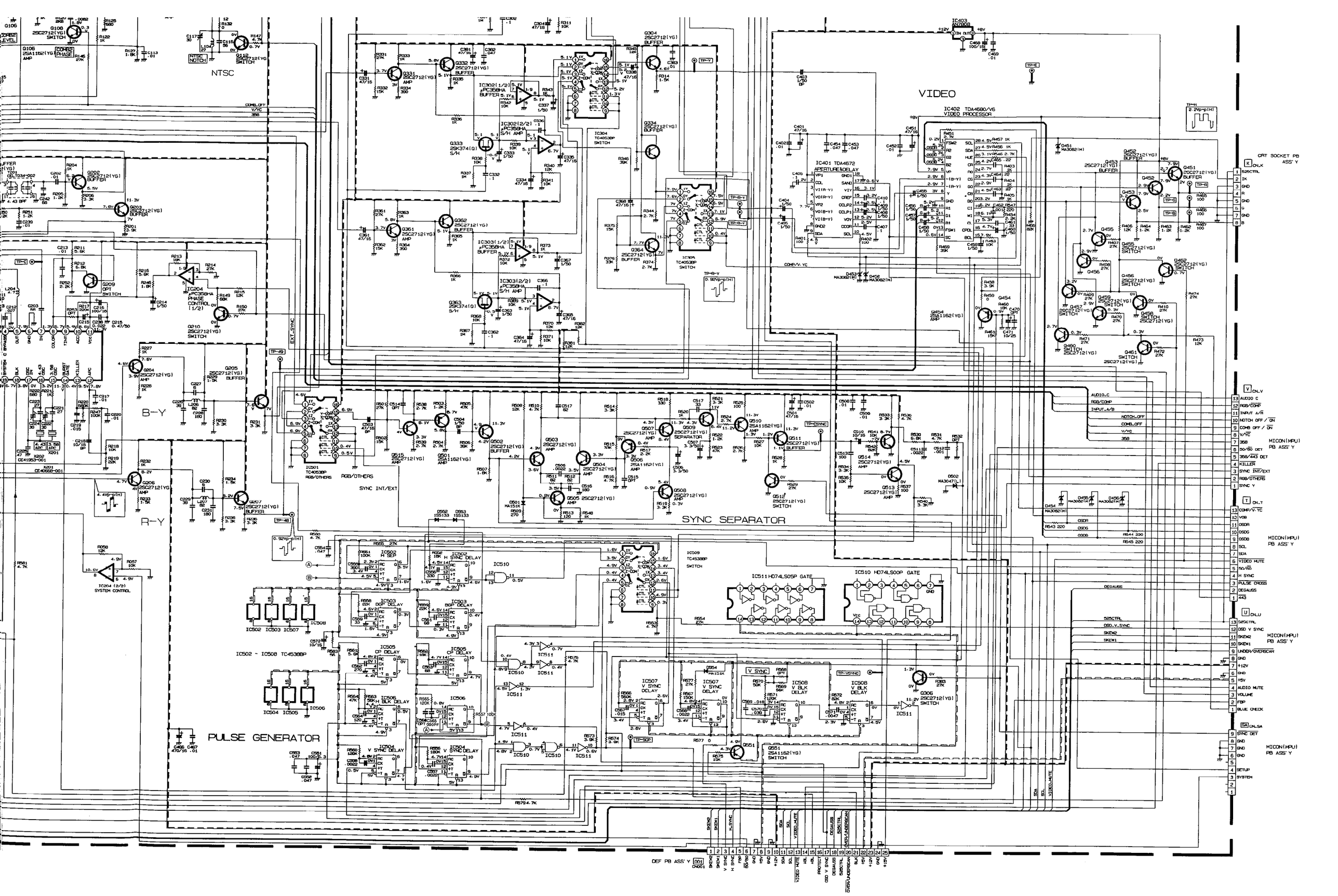
※This table shows only chip components

SIGNAL PWB CIRCUIT DIAGRAM

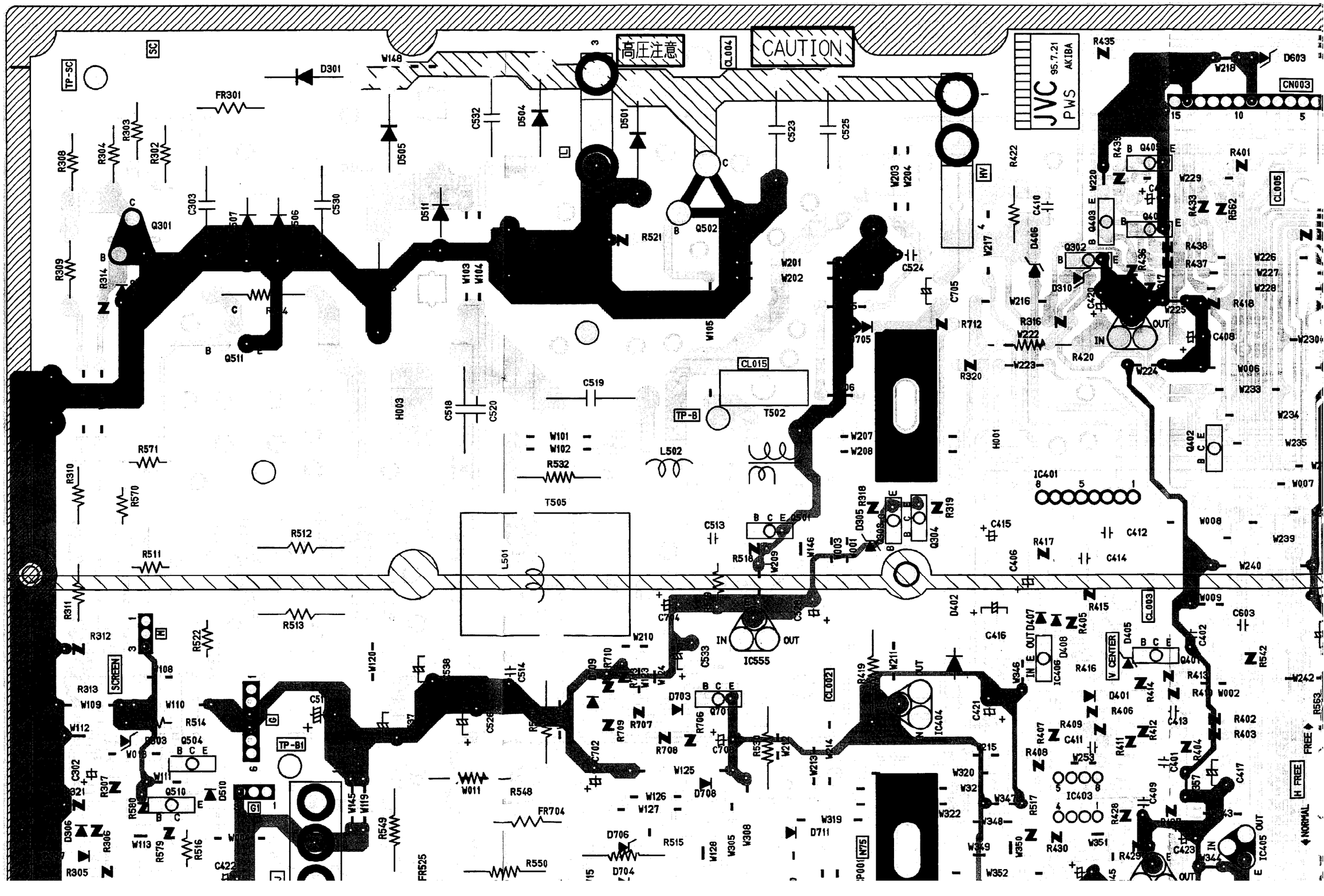


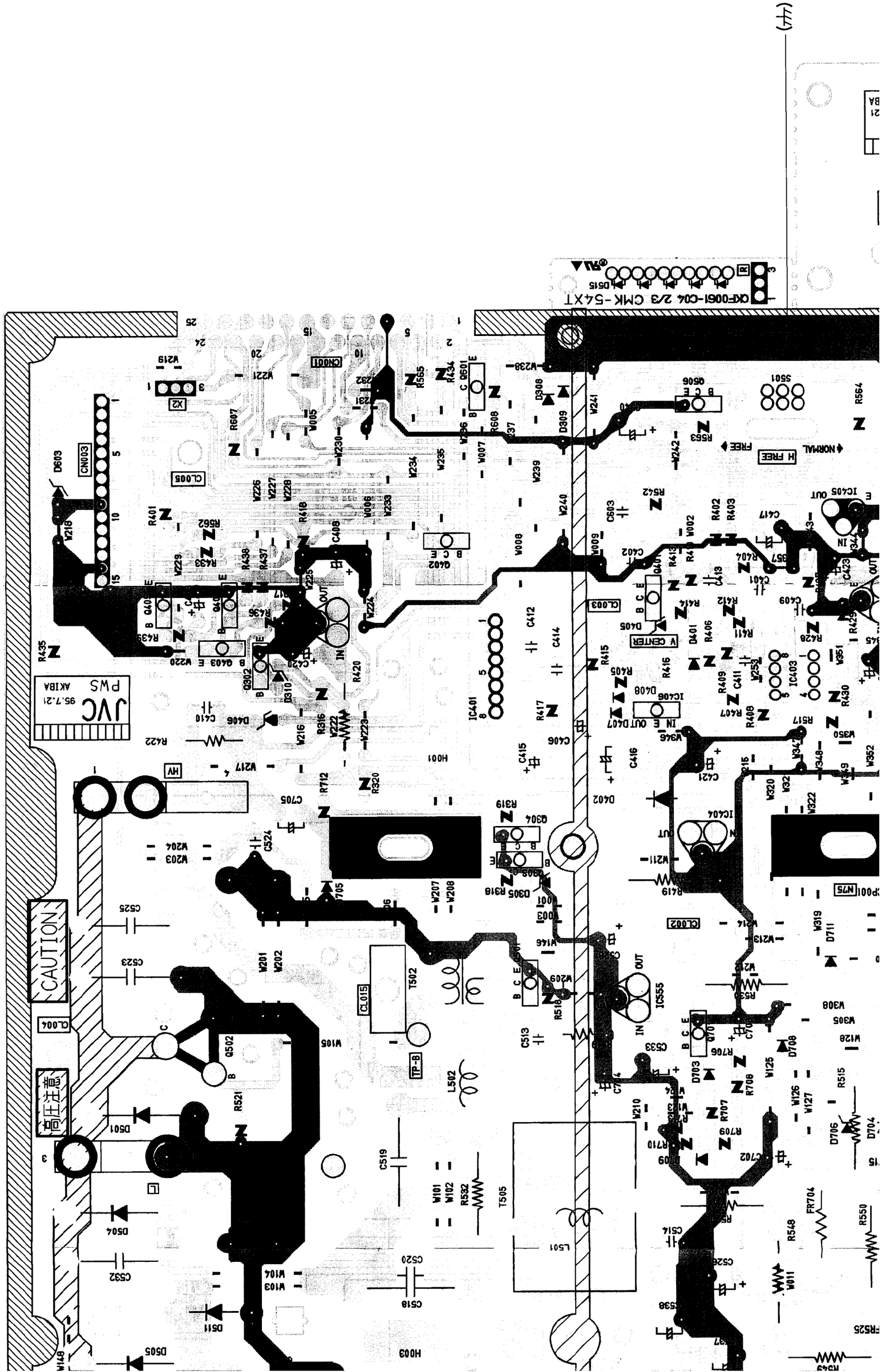

PULSE CROSS
AUDIO
VIDEO
NTSC
PAL
B-Y
SYNC INT/EXT
RGB/OTHERS
SYNC SEPARATOR
INPUT PB ASS'Y
DEF PB ASS'Y
SP01 SPEAKER
TO CRT ANODE
TO DEFLECTION PB ASS'Y
CRT PB ASS'Y
CRT SOCKET PB ASS'Y
MICON(MPU) PB ASS'Y
IC501 AN5265 AUDIO
IC402 TDA4580/V6 VIDEO PROCESSOR
IC401 TDA4672 APERTURE&DELAY
IC403 NJM2835
IC304 TC40538P SWITCH
IC305 TC40538P SWITCH
IC501 TC40538P RGB/OTHERS
IC204 μPC358HA PHASE CONTROL (1/2)
IC301(1/2) μPC358HA BUFFER
IC301(2/2) μPC358HA S/H AMP
IC302(1/2) μPC358HA BUFFER
IC302(2/2) μPC358HA S/H AMP
IC303(1/2) μPC358HA BUFFER
IC303(2/2) μPC358HA S/H AMP
■ NOTICE
OPT : NO PART MONTED

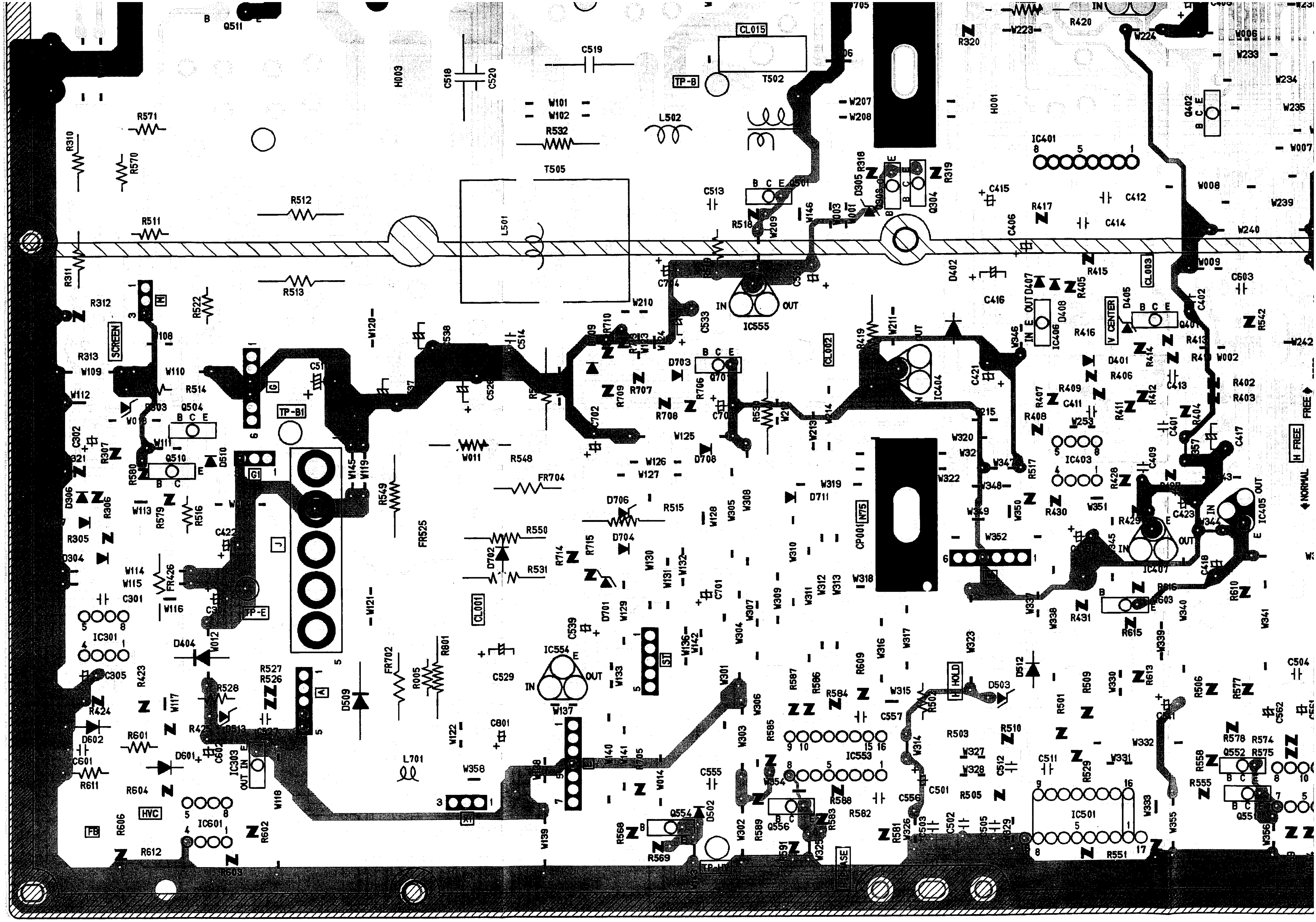

CHROMA
IC201 AN5625N CHROMA
IC202 TC4053BP SWITCH
IC203 AN5640 SYSTEM DETECT
IC204 (2/2) SYSTEM CONTROL
IC201 ② PIN
IC201 ⑦ PIN
B-Y
R-Y
NTSC
IC301 TC4053BP RGB/OTHERS
RGB/OTHERS
SYNC INT/EXT
IC302(1/2) μPC358HA BUFFER
IC302(2/2) μPC358HA S/H AMP
IC303(1/2) μPC358HA BUFFER
IC303(2/2) μPC358HA S/H AMP
IC304 TC4053BP SWITCH
IC305 TC4053BP SWITCH
IC401 APERTURE
SYNC SEPARATOR
PULSE GENERATOR
IC501 TC4053BP RGB/OTHERS
IC502 ~ IC508 TC4538BP
IC509 TC4538BP SWITCH
IC510
IC511 HD74LS05P GATE
IC504 IC505
IC502 IC503 IC507
IC504 IC506
358/443 DET
50/60 DET
KILLER
V SYNC
H SYNC
SIGNAL PB ASS'Y
FX-1072A
DEF PB ASS'Y 001


VIDEO
IC402 TDA4680/V6
VIDEO PROCESSOR
IC401 TDA4672
APERTURE DELAY
IC403 AN7806
NTSC
PHASE CONTROL (1/2)
IC204 (2/2)
SYSTEM CONTROL
B-Y
R-Y
RGB/OTHERS
SYNC INT/EXT
SYNC SEPARATOR
PULSE GENERATOR
IC502 ~ IC508 TC4538BP
IC509 TC4538BP
IC510 HD74LS05P GATE
IC511 HD74LS00P GATE
V SYNC DELAY
V BLK DELAY
H SYNC DELAY
H SEP
CP DELAY
H BLK DELAY
AUDIO C
RGB/COMP
INPUT A/B
NOTCH OFF / ON
COMB OFF / ON
V/VC
358
MICON(MPU) PB ASS'Y
CRT SOCKET PB ASS'Y
DEF PB ASS'Y
SYNC SEPARATOR
SYNC INT/EXT
EXT SYNC
COMB-OFF V/VC 358
NTSC NOTCH
COMB2 PHASE
SWITCH
BUFFER
AMP
SEPARATOR
DELAY
GATE
DEGAUSS
VIDEO MUTE
SCL
SDA
+12V
+5V
GND

DEFLECTION PWB PATTERN DIAGRAM (FX-2033A)




CAUTION
高圧注意
JVC
PWS
AK1BA
CN001
CN003
CN005
CL003
CL004
CL005
CL015
CL002
H001
H003
TP-B
V CENTER
H FREE
NORMAL
FREE
IN
OUT
CRT-0061-C04 2/3 CMK-54XT



Q511
C519
CL015
T502
TP-B
H003
C518
C520
W101
W102
R532
L502
R571
R310
R570
T505
R512
R511
L501
C513
R518
W209
W146
R318
R319
Q304
D305
C415
R417
C412
C414
C406
R420
W223
R320
H001
W207
W208
IC401
Q402
W224
W006
W233
W234
W235
W007
W008
W239
W240
W009
R311
R312
R513
R522
SCREEN
W108
R313
W109
W110
R514
W112
R503
Q504
TP-B1
W120
W210
C533
IC555
IN
OUT
C704
R710
D703
R707
R709
R706
R708
W125
D708
W126
W127
CL002
R419
W211
IC404
C421
C416
D402
D407
D408
IC406
R416
V CENTER
D405
Q401
R413
R542
W242
W002
D401
R406
R409
R407
R408
C411
W253
C413
R412
R402
R403
R404
C417
H FREE
FREE
NORMAL
IC403
R428
C409
C401
C402
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R405
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CL003
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C302
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D510
R580
W113
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R306
R305
D304
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W115
FR426
C301
W116
IC301
C305
R423
W117
R424
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C601
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R606
R612
R603
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HVC
C422
TP-E
D404
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R526
R528
D509
W145
W119
R549
FR525
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FR704
D706
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D704
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R502
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W301
W303
R585
IC553
C557
R503
R510
W327
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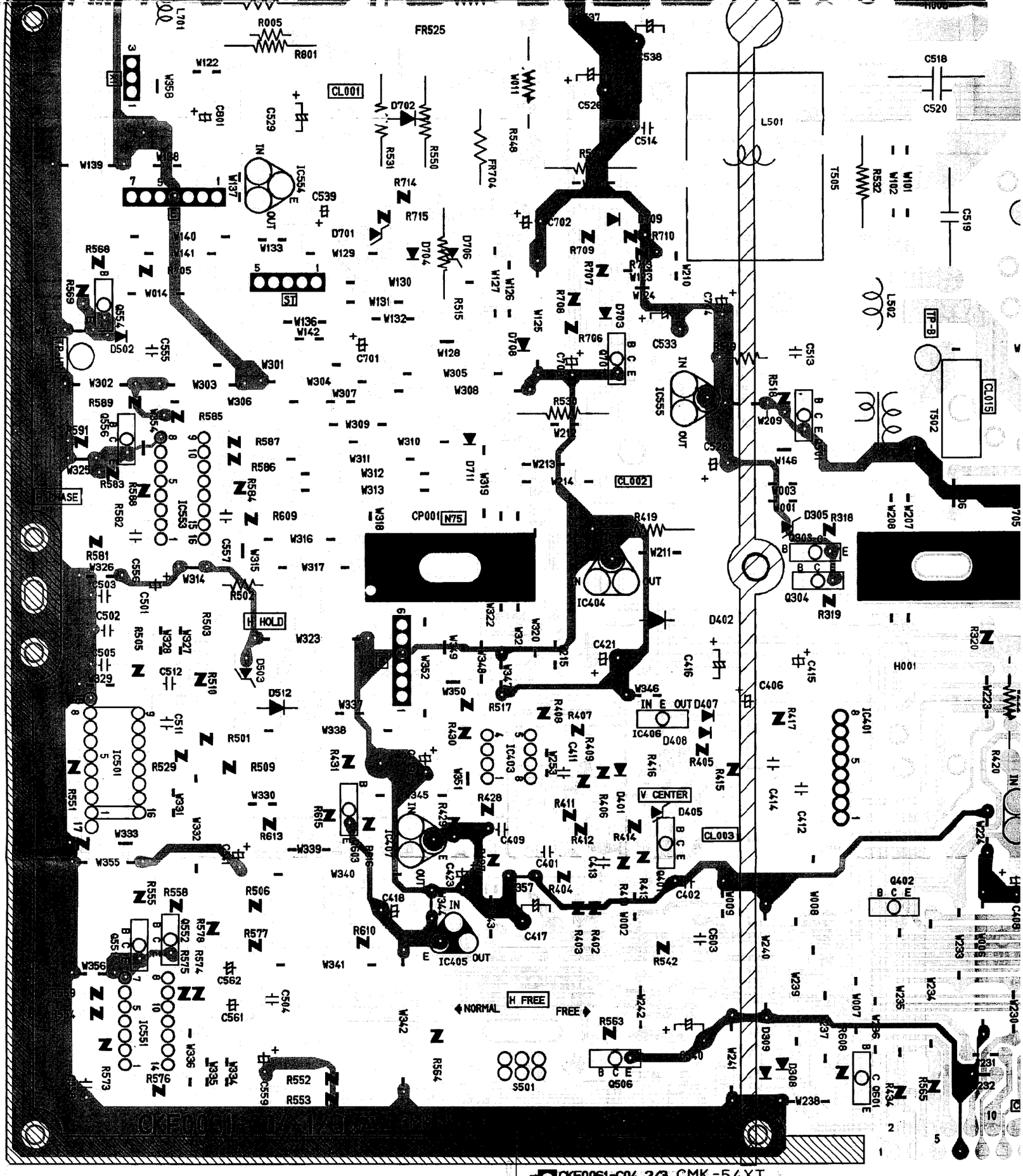
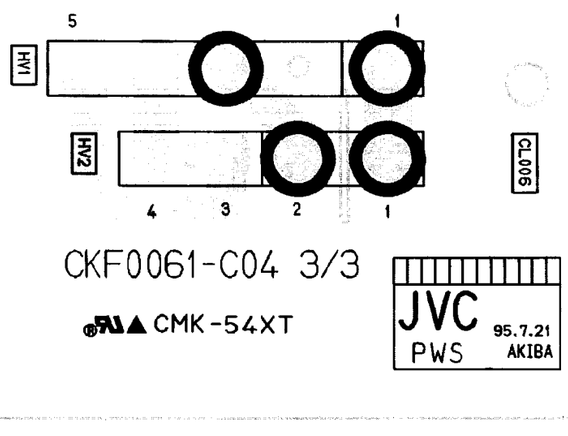
C512
C511
R529
W332
W331
C541
R578
R574
Q552
R575
R558
R555
Q553
W356
C555
W302
R589
Q556
Q554
R568
R569
D502
R588
R582
R583
W314
C556
C501
R505
IC501
W333
W355
R551
R581
W326
C503
C502
C505
W329
W325
R591
TP-H
BASE


CKF0061-C04 2/3 CMK-54XT
CL001
CL002
CL003
CL015
TP-B
H HOLD
H FREE
V CENTER
NORMAL
FREE
IC404
IC405
IC406
IC407
IC501
IC551
IC553
IC554
IC555
IC401
IC403
S501
CP001
N75
L501
L502
T505
T502
H001


HV1
HV2
CL006
CKF0061-C04 3/3
CMK-54XT
JVC
95.7.21
PWS
AKIBA

(44)

DEFLECTION PWB CIRCUIT DIAGRAM

V. SAW MODULE PB ASS' Y
FX-M004A
M O

IC001 CXD2180 V. SAW-GEN

IC101 UPC358 BUFFER

IC102 UPC358 BUFFER

DEFLECTION DSP

PARABOLA OUT

CN003⑤ PIN
0.8Vp-p(V)

CN003⑥ PIN
1.3Vp-p(V)

CN003⑦ PIN
5Vp-p(V)

■ NOTICE
*1 : 2SC3311A(Q)-T
*2 : 2SC1815(YG)-T
*3 : 1SS133-T2
OPT : NO PART MOUNTED

CN001 SIGNAL PB ASS' Y

CN003 POWER PB ASS' Y

CN00E CRT PB ASS' Y

ST OPT CNOST

IC555 AN7812F 12V REGULATOR

IC408 AN7805F 5V REGULATOR

IC303 AN79L05-Y -5V REGULATOR

IC553 TC4538BP PHASE

IC403 NJM4560D PIN & V AMP

IC601 NJM4560D H/V GAIN

IC401 UPC1498H V OUT

IC301 NJM4560D H/V BUFFER &SCREEN

Q554 *2 AFC SW

Q556 *2 PHASE BUFFER

Q302 *2 MUTE

Q303 *2 MUTE

Q304 *2 MUTE

Q402 *2 BUFFER

Q506 CN H AMP

Q501 2SC1959(Y) UNDER SW

Q503 2SC1959(Y) UNDER SW

Q701 PROTECT

Q403 *2 V SW

Q404 *2 V SW

Q405 *2 V SW

Q501 2SC3187-T H. DRIVE

Q502

Q301 2SC4532 SCREEN OUT

S501 QSS1F22-C09 NORMAL 2H FREE FREE FREE RUN SW

D501 1SS81
D502 1SS81
D512 1SS81
D601 1SS81
D602 1SS81
D701 1SS146
D702 1SS146
D703 *3
D704 *3
D706 MA4110(M)
D708 *3
D711 *3
D712 1SS146
D301 RU4DS
D302 *3
D303 MA4062(M)
D306 *3
D307 *3
D309 *3
D308 *3
D310 RD3.3ES(B2)
D603 MA4047(M)
D101 MA111
D305 RD9.1ES(B3)
D504 ERD07-15-L
D505 ERD07-15-L

T502 CE42034-001
T501 CE42035-001

FBT CXA1645P

FX-

V. SAW MODULE PB ASS' Y
FX-M004A
M 0

IC001
CXD2018Q
V. SAW-GEN

IC101
UPC358
BUFFER

IC102
UPC358
BUFFER

DEFLECTION
DSP

PARABOLA OUT

L001
CELP005-4R7Z

L101
CELP006-4R7Z

CN003 CN003

50/60

CN00W W POWER PB ASS' Y

CN00E E CRT PB ASS' Y

ST CN05T OPT

CN003⑤ PIN
0.8Vp-p(V)

CN003⑥ PIN
1.3Vp-p(V)

CN003⑦ PIN
5Vp-p(V)

:3311A(G)-T
:1815(YG)-T
:133-T2
PART MOUNTED

CN00R R
LED
SIGNAL PB ASS' Y
0515 LD-12030U
TALLY

FX-2033A(2/2)

IC403 NJM4560D
PIN & V AMP

IC501
NJM4560D
H/V GAIN

IC401 UPC1498H V OUT
V. OUT
PUMP UP

IC303
AN79L05-Y
-5V REGULATOR

IC301
NJM4560D
H/V BUFFER
&SCREEN

Q302 *2 MUTE

Q506 CN H AMP

Q402 *2 BUFFER

Q503 2SC1959(Y) UNDER SW

Q601 2SC1959(Y) UNDER SW

Q501 2SC3187-T H. DRIVE

Q502

Q403 *2 V SW

Q404 *2 V SW

Q405 *2 V SW

Q701 *2 PROTECT

Q301 2SC4532 SCREEN OUT

TP-HV

TP-SC

SCREEN

CN05C
SCREEN SC CRT SOCKET PB ASS' Y

CN0HV
HV

DY01
DEFLECTION YOKE
V C.28229-00A

CN00M M
INPUT PB ASS' Y

CN00L L
SIGNAL PB ASS' Y

T502 CE42034-001

HL502 CELL009-001 LIN COIL

CP001 ICP-N75-Y

D501 ERD07-15-L

D504 ERD07-15-L

D505 ERD07-15-L

D601 1SS81

D602 1SS81

D512 1SS81

D603 MA4047(M)

D706 MA4110(M)

D704 *3

D708 *3

D711 *3

D709 1SS146

D705 1SS146

D703 *3

D301 RU4DS

D303 MA4062(M)

D304 *3

D306 *3

D307 *3

D310 (BZ)

D701 MA111

FR301 QRH127J-182M

C005 .0033
C102 .001
C103 .001
C004 0.01
C105 2200
C106 0.33
C003 0.1
C113 .022
C111 .01
C002 0.01
C112 2200
C107 .01
C109 .001
C108 .001
C001 .47/50
C101 .47/50
C110 .01
C602 100/16
C703 330/16
C704 100/25
C403 4.7/50
C540 2200/16
C304 47/50
C305 10/16 BP
C303 4700 1.6KV Mmp
C301 0.001 MY
C302 10/50
C501 0.01 MY
C503 OPT
C513 470 500V
C514
C519 1.0 200V QFZ0110-1052
C532 7000 1.4KVH QFZ0117-7001S
C533 2200 1.4KVH QFZ0117-2001S

R001 100
R002 100
R003 1K
R004 1K
R005 330K
R006 12K
R007 100
R101 56K
R102 10K
R103 100
R104 4.7K
R105 10K
R105 33K
R107 33K
R108 100
R109 100
R110 100
R111 100
R112 100
R113 100K
R307 4.7K
R317 47K
R530 4.7 2W
R531 2.2K 2W
R532 470 2W OHM
R533 300/25
R551 120
R562 1.8K
R563 470
R564 33K
R565 100
R609 2.2M
R610 1K
R601 10K 1/2W
R301 1.8K 1/2W
R302 390K 1/2W
R303 390K 1/2W
R304 390K 1/2W
R305 1.5W
R305 5.6K
R306 47K
R309 47K
R310 2.2M 1/2W
R311 2.2M 1/2W
R312 68K
R313 50KB
R314 10K
R321 10K
R423 27K
R424 22K
R425 100
R426 33K
R427 5.6K
R428 15K
R429 15K
R430 39K
R431 68K
R435 15K
R436 10K
R437 10K
R438 10K
R439 2.2K
R501 150
R517 470
R518 330
R519 5.6K 1/2W
R570 1K 1/2W
R571 1K 1/2W
R611 56K 1/2W
R601 10K 1/2W
R602 1K
R603 6.8K
R604 18K
R605 6.8K
R606 6.8K
R607 10K
R608 47K
R609 2.2M
R610 1K
R612 5KB
R613 10K
R615 3.3K
R616 18K
R701 100K
R702 100K
R705 22K
R706 100
R707 33K
R708 10K
R709 100K
R710 39K
R712 1K
R713 2.2K
R801 100

Q301 2SC4532 SCREEN OUT
Q302 *2 MUTE
Q303 2SC4532 SCREEN OUT
Q402 *2 BUFFER
Q403 *2 V SW
Q404 *2 V SW
Q405 *2 V SW
Q501 2SC3187-T H. DRIVE
Q502
Q503 2SC1959(Y) UNDER SW
Q506 CN H AMP
Q601 2SC1959(Y) UNDER SW
Q701 *2 PROTECT

*2 : 2SC1815(YG)-T
*3 : 1SS133-T2
OPT : NO PART MOUNTED

DEFLECTION PB ASS' Y

SIGNAL PB ASS' Y

POWER PB ASS' Y

CRT PB ASS' Y

IC555 AN7812F 12V REGULATOR

IC403 NJM4560D PIN & V AMP

IC601 NJM4560D H/V GAIN

IC301 NJM4560D H/V BUFFER &SCREEN

IC303 AN79L05-Y -5V REGULATOR

IC553 TC4538BP PHASE

IC551 TC4066BP

IC501 HA11423 H. AFC_B H. V. OSC

IC408 AN7805F 5V REGULATOR

IC401 UPC1498H V OUT

IC406 TA78L009AP-Y 9V REGULATOR

IC405 TA79012S -12V REGULATOR

IC404 AN7812F 12V REGULATOR

IC407 AN7812F 12V REGULATOR

Q554 *2 AFC SW

Q556 *2 PHASE BUFFER

Q304 *2 MUTE

Q302 *2 MUTE

Q506 CN H AMP

Q601 2SC1959(Y) UNDER SW

Q603 2SC1959(Y) UNDER SW

Q402 *2 BUFFER

Q552 *2 SKEW SW

Q551 *2 SKEW SW

Q701 *2 PROTECT

Q403 *2 V SW

Q404 *2 V SW

Q405 *2 V SW

Q401 *1 V AMP

Q301 2SC4632 SCREEN OUT

Q501 2SC3187-T H. DRIVE

Q502 2SC4589-C1 H. OUT

Q510 2SA1309 DIM AMP

Q504 2SA1309A(R)-T DIM AMP

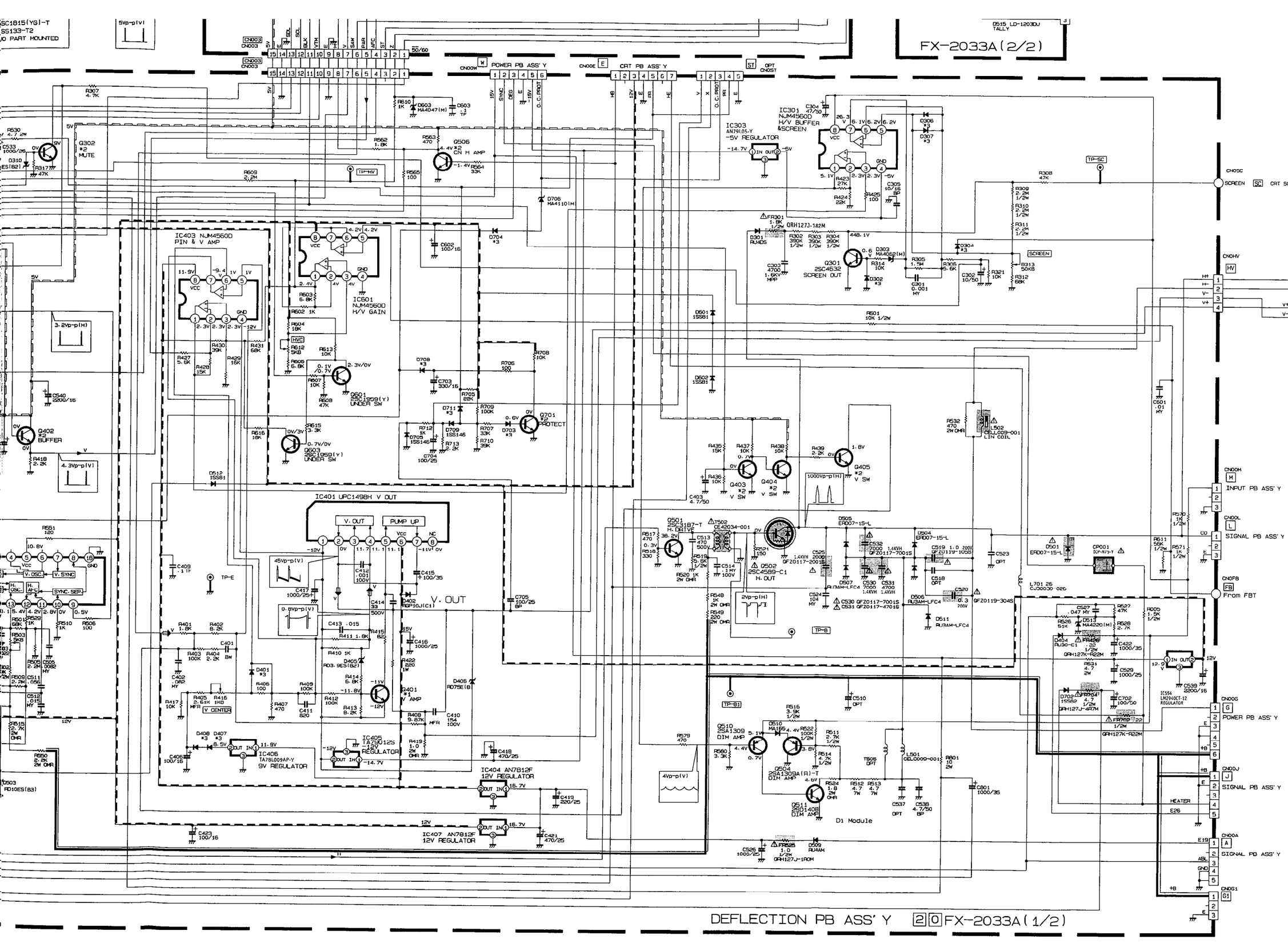
Q511 2SD1408 DIM AMP

V. OUT

Di Module

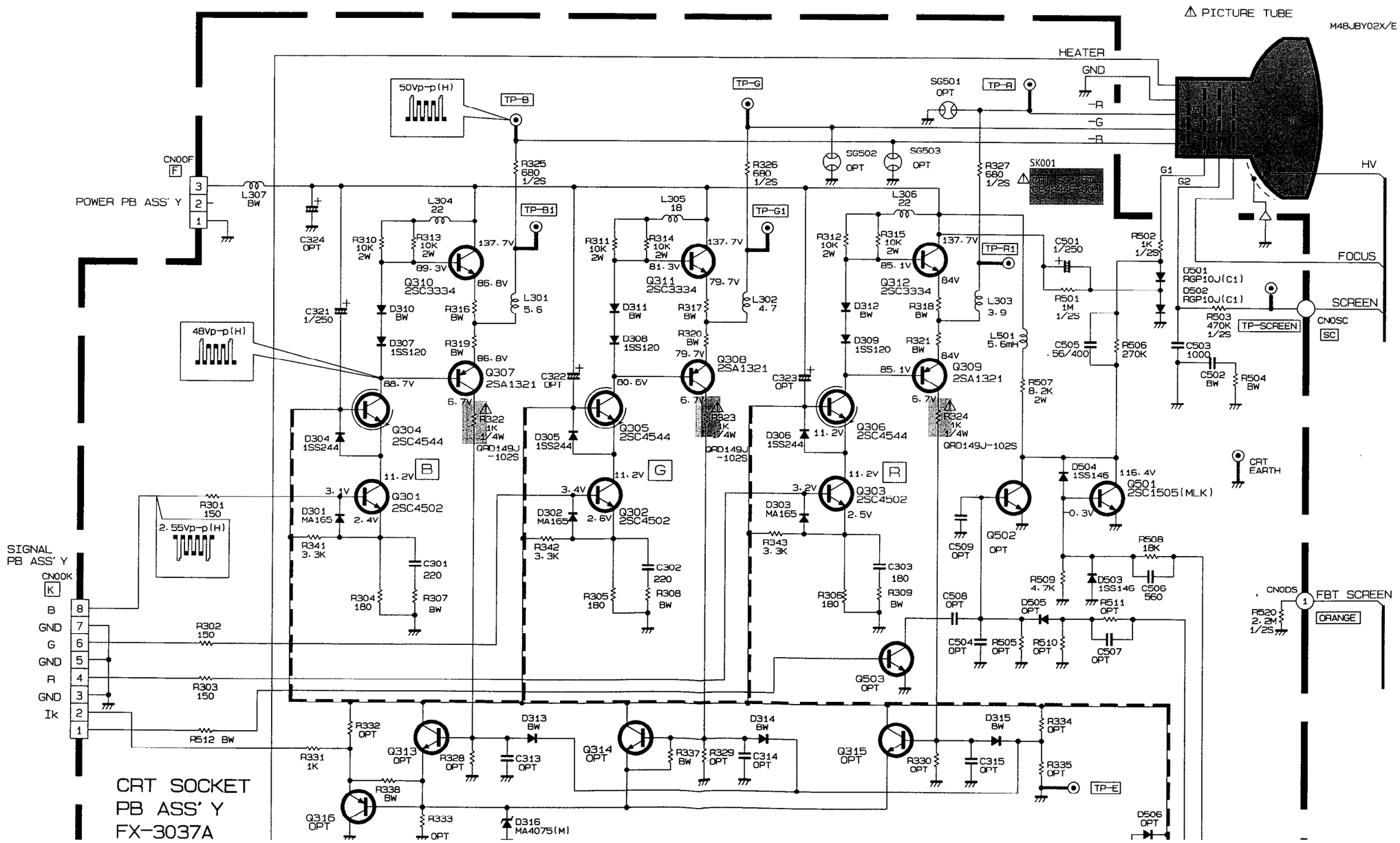
— 75 —

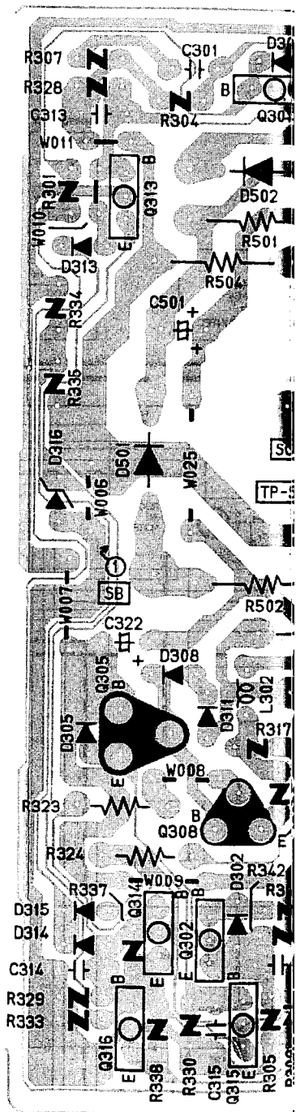
— 76 —

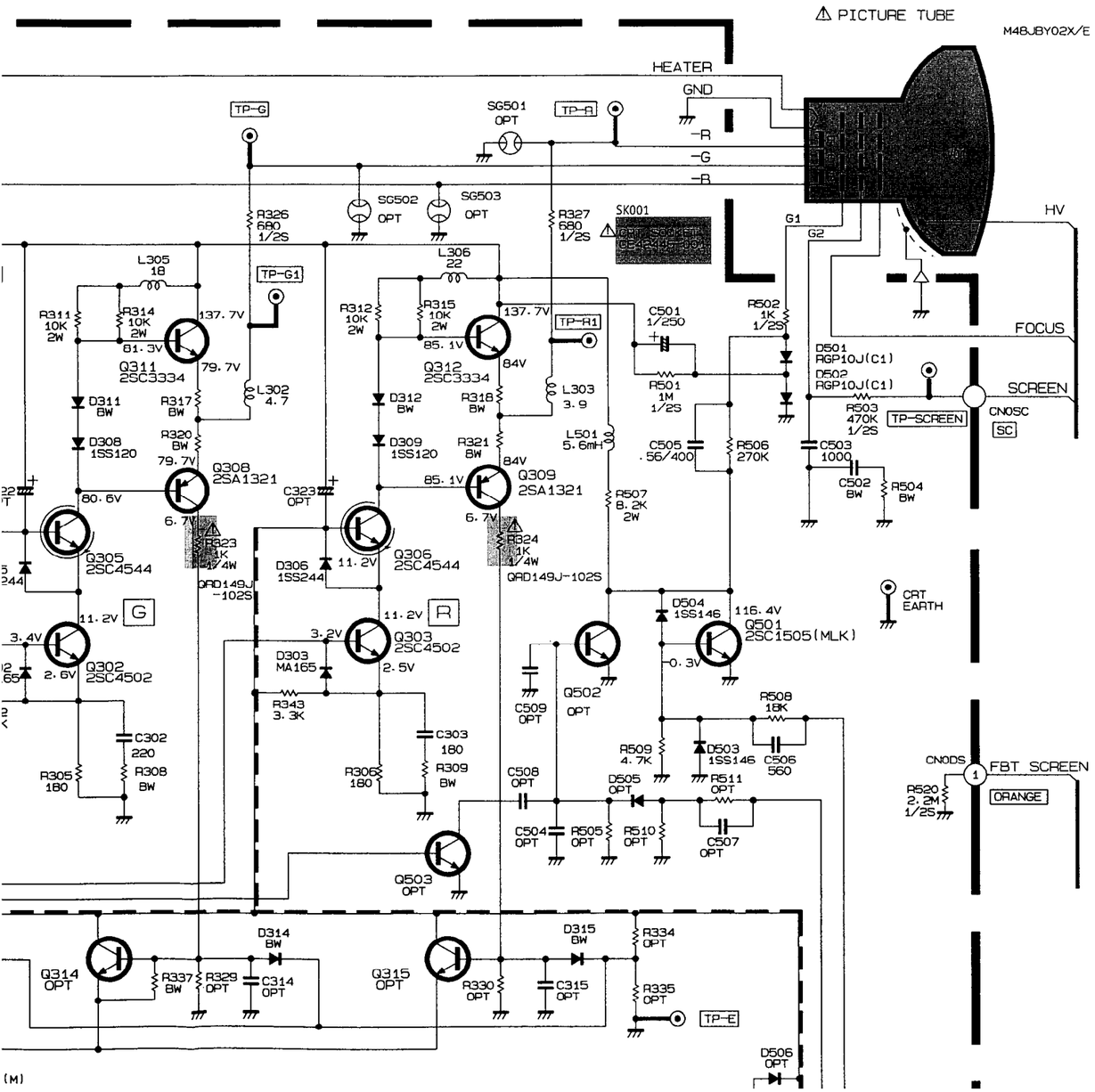


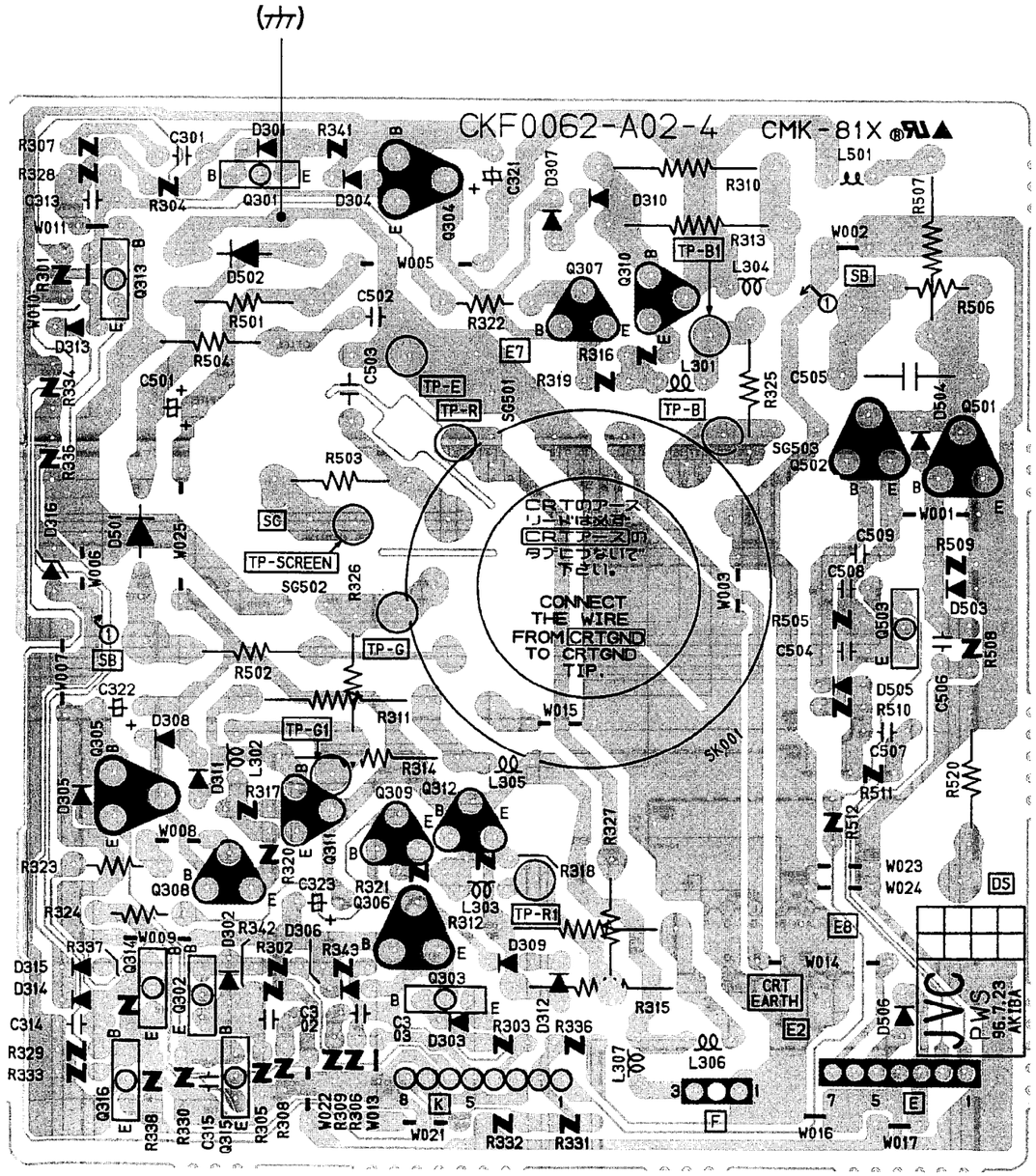
DEFLECTION PB ASS'Y 20 FX-2033A(1/2)

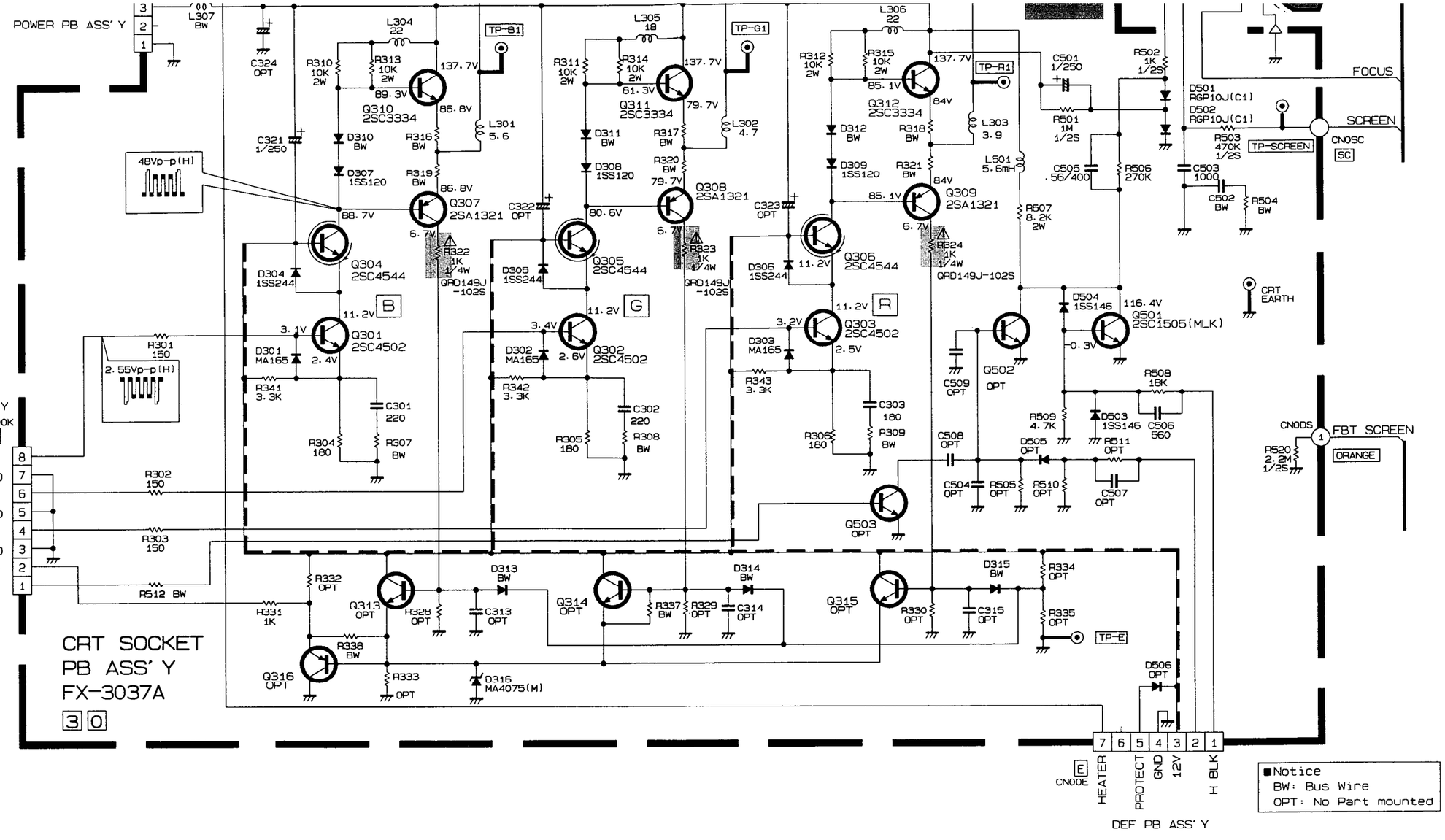
CRT SOCKET CIRCUIT DIAGRAM / PATTERN DIAGRAM (FX-3037A)

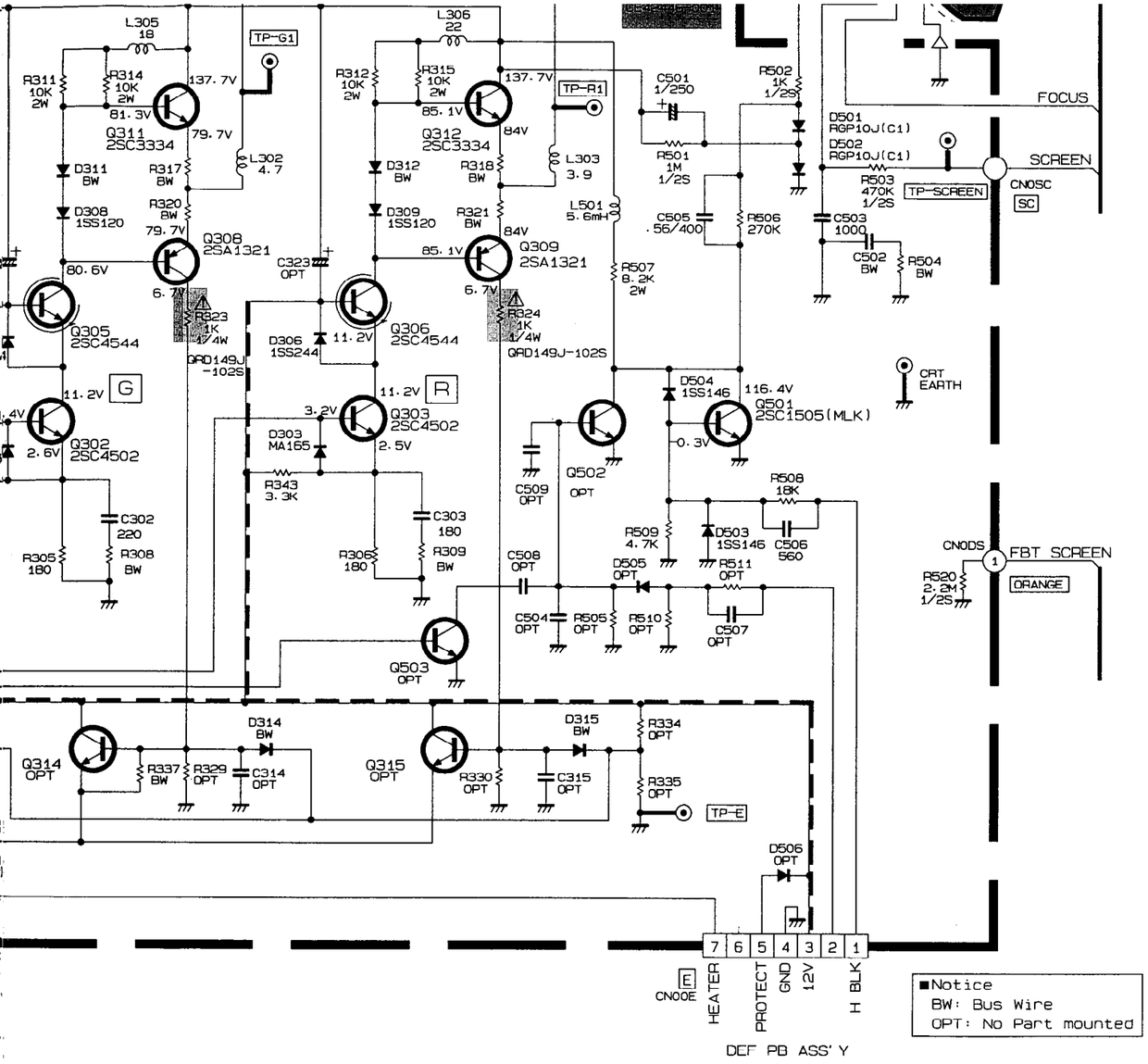


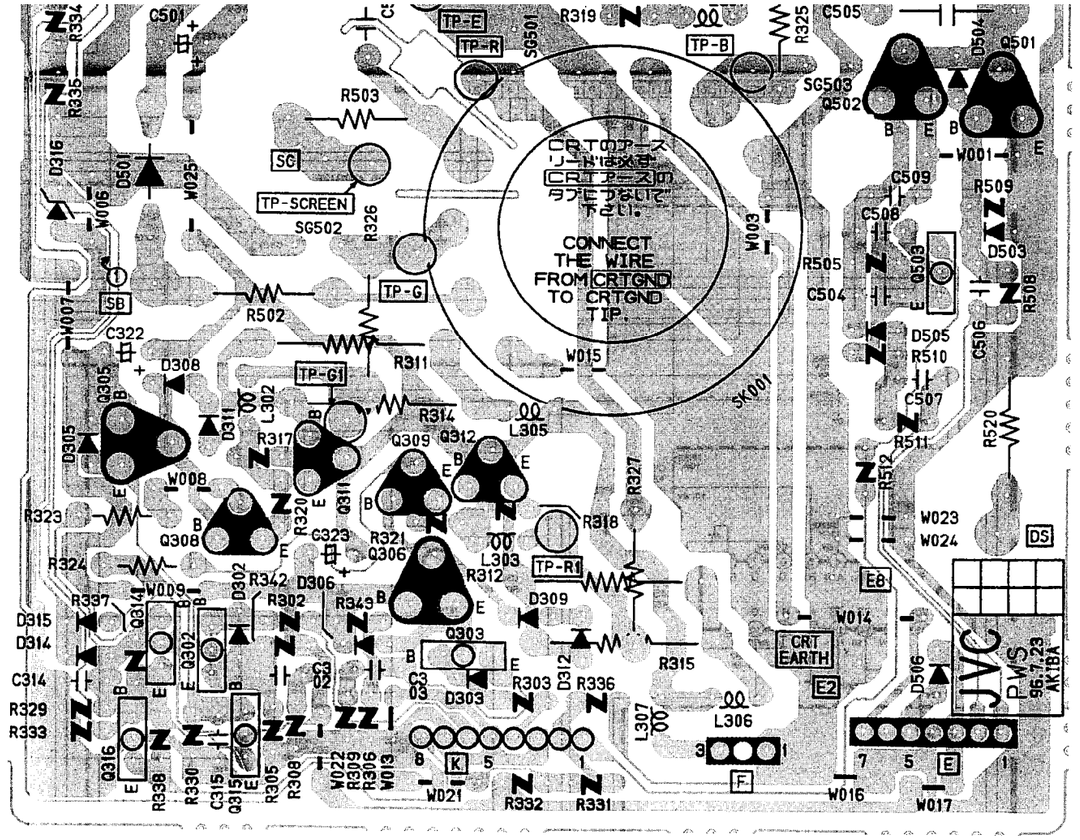



⚠ PICTURE TUBE
M48JBY02X/E
HEATER
GND
-R
-G
-B
HV
G1
G2
FOCUS
SCREEN
CNOSC
SC
CRT EARTH
CNODS
FBT SCREEN
ORANGE
TP-G
TP-R
TP-G1
TP-R1
TP-E
TP-SCREEN
SG501 OPT
SG502 OPT
SG503 OPT
SK001
R326 680 1/2S
R327 680 1/2S
L305 18
L306 22
L302 4.7
L303 3.9
L501 5.6mH
R311 10K 2W
R314 10K 2W
R312 10K 2W
R315 10K 2W
R317 BW
R318 BW
R320 BW
R321 BW
137.7V
81.3V
85.1V
84V
79.7V
Q311 2SC3334
Q312 2SC3334
Q308 2SA1321
Q309 2SA1321
Q305 2SC4544
Q306 2SC4544
Q303 2SC4502
Q302 2SC4502
Q501 2SC1505(MLK)
Q502 OPT
Q503 OPT
D311 BW
D312 BW
D308 1SS120
D309 1SS120
D306 1SS244
D303 MA165
D504 1SS146
D503 1SS146
D501 RGP10J(C1)
D502 RGP10J(C1)
R623 1K 1/4W
R624 1K 1/4W
QRD149J-102S
R343 3.3K
R501 1M 1/2S
R502 1K 1/2S
R503 470K 1/2S
R504 BW
R505 270K
R506 270K
R507 8.2K 2W
R508 18K
R509 4.7K
R511 OPT
R520 2.2M 1/2S
C501 1/250
C505 .56/400
C503 1000
C502 BW
C509 OPT
C504 OPT
C505 OPT
C507 OPT
C508 OPT
C506 560
C302 220
C303 180
R305 180
R306 180
R308 BW
R309 BW
Q314 OPT
Q315 OPT
R337 BW
R329 OPT
C314 OPT
R330 OPT
C315 OPT
R334 OPT
R335 OPT
D314 BW
D315 BW
D506 OPT
11.2V
3.4V
2.6V
3.2V
2.5V
116.4V
0.3V
6.7V
80.6V
G
R

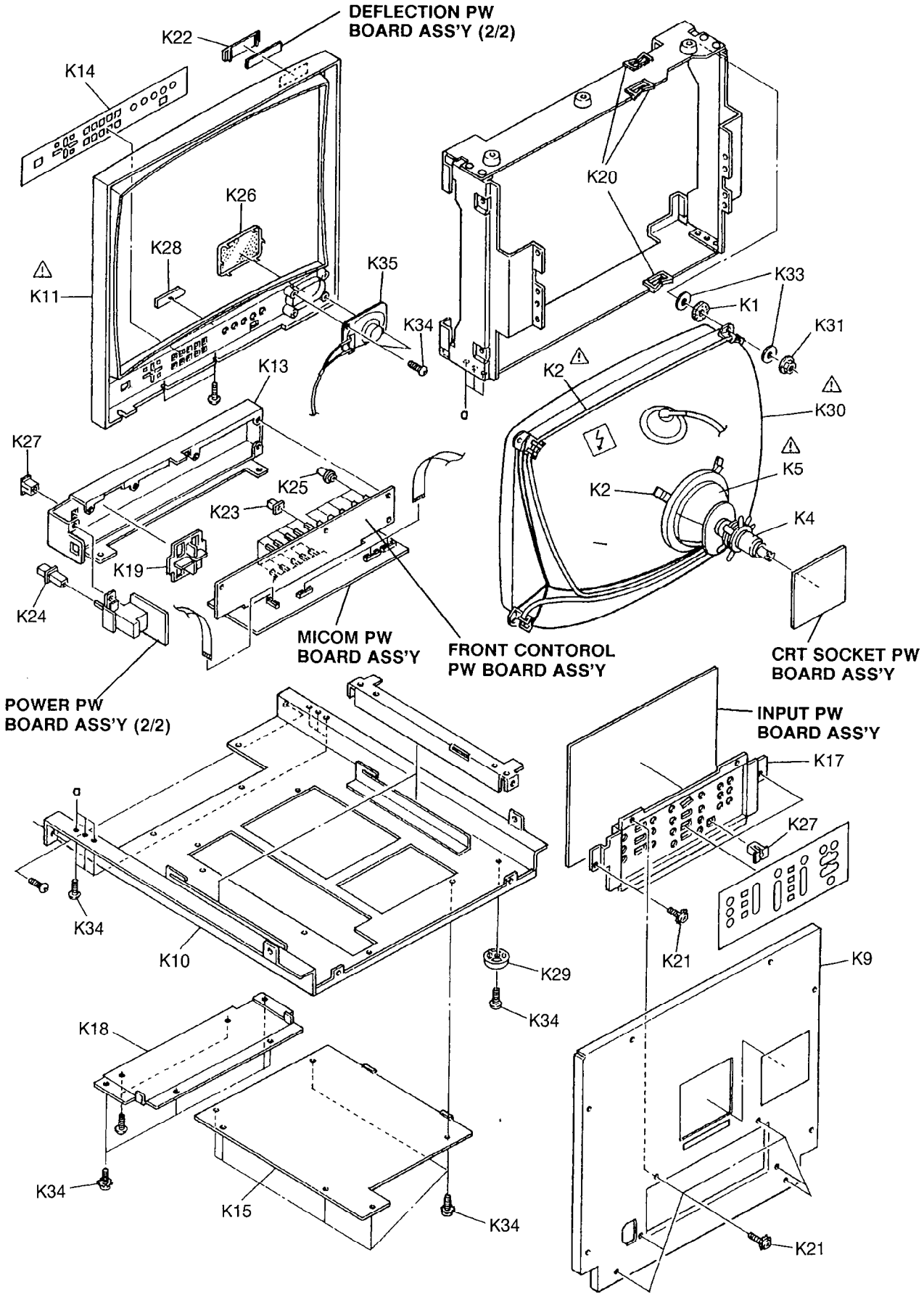

CKF0062-A02-4 CMK-81X
CRTのアース
"J-H"は本体
CRTアースの
タブにつなげて
下さい.
CONNECT
THE WIRE
FROM CRTGND
TO CRTGND
TIP.
TP-B1
TP-B
TP-E
TP-R
TP-G
TP-G1
TP-R1
TP-SCREEN
SG501
SG502
SG503
SK001
SB
DS
E2
E7
E8
F
K
CRT EARTH
L501
L301
L302
L303
L304
L305
L306
Q501
Q502
Q503
Q301
Q302
Q303
Q304
Q305
Q306
Q307
Q308
Q309
Q310
Q311
Q312
D301
D302
D303
D304
D305
D306
D307
D308
D309
D310
D311
D312
D313
D501
D502
D503
D504
D505
D506
R301
R302
R303
R304
R306
R307
R308
R309
R310
R311
R312
R313
R314
R316
R317
R318
R319
R320
R321
R322
R323
R324
R325
R326
R327
R328
R329
R330
R331
R332
R333
R334
R335
R336
R337
R341
R343
R501
R502
R503
R504
R505
R506
R507
R508
R509
R510
R511
R512
R520
C301
C302
C303
C309
C310
C311
C312
C313
C314
C315
C316
C321
C322
C323
C501
C502
C503
C504
C505
C506
C507
C508
C509
W001
W002
W003
W005
W006
W007
W008
W009
W010
W011
W013
W014
W015
W016
W017
W021
W022
W023
W024
W025
JVC
P.W.S
96.7.23
AK1BA

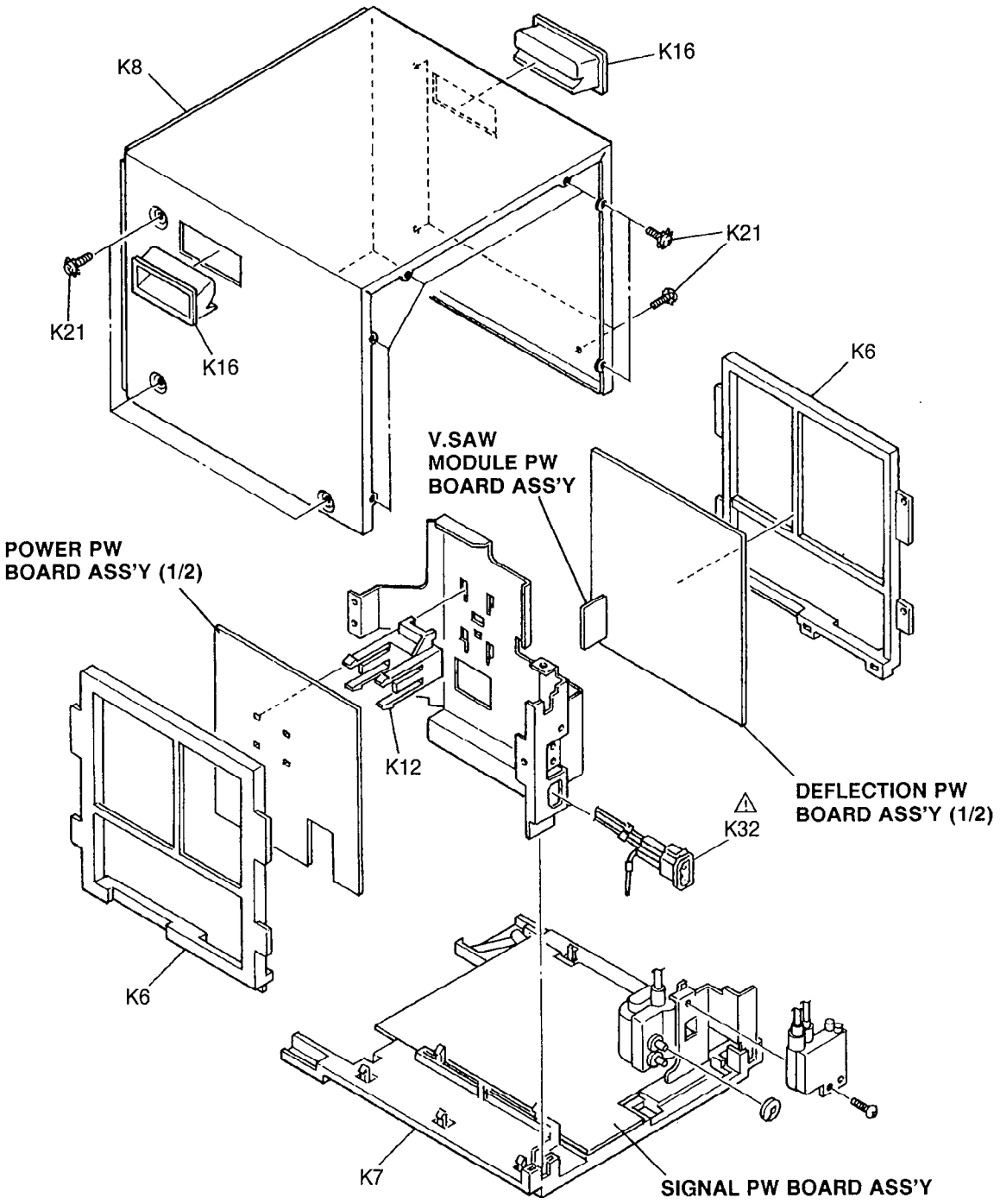

POWER PB ASS' Y
SIGNAL PB ASS' Y
CN00K
CRT SOCKET PB ASS' Y FX-3037A
30
DEF PB ASS' Y
CN00E
HEATER
PROTECT
GND
12V
H BLK
FOCUS
SCREEN
CNOSC
SC
TP-SCREEN
CRT EARTH
CN00S
FBT SCREEN
ORANGE
TP-B1
TP-G1
TP-R1
TP-E
48Vp-p(H)
2.55Vp-p(H)
Q310 2SC3334
Q311 2SC3334
Q312 2SC3334
Q307 2SA1321
Q308 2SA1321
Q309 2SA1321
Q304 2SC4544
Q305 2SC4544
Q306 2SC4544
Q301 2SC4502
Q302 2SC4502
Q303 2SC4502
Q501 2SC1505(MLK)
Q316 OPT
D316 MA4075(M)
D501 RGP10J(C1)
D502 RGP10J(C1)
D504 1SS146
D503 1SS146
QRD149J-102S
Notice
BW: Bus Wire
OPT: No Part mounted


L305 18
L306 22
TP-G1
TP-R1
R311 10K 2W
R314 10K 2W
137.7V
81.3V
79.7V
Q311 2SC3334
L302 4.7
R312 10K 2W
R315 10K 2W
85.1V
84V
Q312 2SC3334
L303 3.9
D311 BW
R317 BW
D312 BW
R318 BW
D308 1SS120
R320 BW
D309 1SS120
R321 BW
L501 5.6mH
C501 1/250
R501 1M 1/2S
C505 .56/400
R506 270K
R502 1K 1/2S
D501 RGP10J(C1)
D502 RGP10J(C1)
R503 470K 1/2S
C503 1000
C502 BW
R504 BW
FOCUS
SCREEN
TP-SCREEN
CNOSC
SC
79.7V
Q308 2SA1321
80.6V
6.7V
R323 1K 1/4W QRD149J-102S
C323 OPT
85.1V
Q309 2SA1321
6.7V
R324 1K 1/4W QRD149J-102S
R507 8.2K 2W
Q305 2SC4544
D306 1SS244
11.2V
Q306 2SC4544
11.2V
G
R
CRT EARTH
D504 1SS146
116.4V
Q501 2SC1505(MLK)
-0.3V
11.2V
Q303 2SC4502
2.5V
3.2V
2.6V
Q302 2SC4502
D303 MA165
R343 3.3K
C509 OPT
Q502 OPT
R508 18K
C302 220
C303 180
R305 180
R308 BW
R306 180
R309 BW
R509 4.7K
D503 1SS146
C506 560
C508 OPT
D505 OPT
R511 OPT
CNODS
FBT SCREEN
ORANGE
R520 2.2M 1/2S
C504 OPT
R505 OPT
R510 OPT
C507 OPT
Q503 OPT
Q314 OPT
R337 BW
R329 OPT
C314 OPT
D314 BW
Q315 OPT
R330 OPT
C315 OPT
D315 BW
R334 OPT
R335 OPT
TP-E
D506 OPT
CNOOE
HEATER
PROTECT
GND
12V
H BLK
7 6 5 4 3 2 1
■Notice
BW: Bus Wire
OPT: No Part mounted
DEF PB ASS'Y


TP-E
TP-R
TP-B
SG503
SG501
SG502
TP-SCREEN
TP-G
TP-G1
TP-R1
SB
SG
CONNECT THE WIRE FROM CRTGND TO CRTGND TIP.
CRT EARTH
E2
E8
DS
W001
W003
W006
W007
W008
W009
W014
W015
W016
W017
W021
W022
W023
W024
W025
SK001
JVC
P-W/S
96.7.23
AK1BA

EXPLODED VIEW




K8
K16
K21
K21
K16
K6
V.SAW
MODULE PW
BOARD ASS'Y
POWER PW
BOARD ASS'Y (1/2)
K12
DEFLECTION PW
BOARD ASS'Y (1/2)
⚠
K32
K6
K7
SIGNAL PW BOARD ASS'Y

REPLACEMENT PARTS LIST

Important Safety Notice

Components identified by the International symbol ⚠ have special characteristics important for safety.
When replacing any of these components, use only manufacturer's specified parts.

Abbreviation of Part Name and Descritpion

1. Resistor

Example:

C 100KOHM, J, 1/4W

TYPE ALLOWANCE

TYPE	ALLOWANCE
C : Carbon	F : ±1%
F : Fuse	G : ±2%
M : Metal Oxide	J : ±5%
Metal Film	K : ±10%
S : Solid	M : ±20%
W : Wire Wound	

2. Capacitor

Example:

C 0.01PF, Z, 50V

TYPE ALLOWANCE

TYPE	ALLOWANCE
C : Ceramic	C : ±0.25pF
E : Electrolytic	D : ±0.5pF
P : Polyester	F : ±1pF
PP : Polypropylene	J : ±5%
S : Styrol	K : ±10%
T : Tantalum	L : ±15%
	M : ±20%
	P : +100%, −0%
	Z : +80%, −20%

Note: For G○○ of Ref. No., not indicate illustration of it part on "Exploded Views".
Printed wiring board assembly with mark (RTL) is no longer available after production discontinuation of the complete set.

	Ref. No.	Part No.	Description
		MECANICAL PARTS	
	K1	A48094-1	RUBBER CUSHION
⚠	K2	CELD056-001	DEGAUSSING COIL
	G1	CEMG002-001Z	FUSE HOLDER
	K3	CE40764-00A	DY WEDGE
	K4	CE42378-00B	MAGNET
	G2	CHFB10924BDN	FFC CABLE
	G3	CHFB11318BDN	FFC CABLE
⚠	K5	CJ28229-00A	DEFLECTION YOKE
	K6	CM12530B01V0	PB BASE
	K7	CM12531001V0	CHASSIS BASE
	K8	CM12690-002	TOP COVER
	K9	CM12692-00A	REAR PANEL
	K10	CM12694-A0A	BOTTOM BASE
	K11	CM1269700EM0	FRONT PANEL
	K12	CM22752001V0	TRANS HOLDER
	K13	CM22909-A01	CONTROL BRACKET
	K14	CM22912-004	CONTROL PANEL
	K15	CM22919-001	BOTTOM SHIELD
	K16	CM35326-002	HANDLE
	K17	CM35946-A01	TERMINAL PANEL
	K18	CM36249-A01	SHIELD COVER
	K19	CM36251-002	CURSOR KNOB
	G4	CM36586-004R	MODEL NAME LABEL
	K20	CM41393-001	CLAMPER
	K21	CM44287-00C	SCREW
	K22	CM44530-E01	TALLY PLATE
	K23	CM46044-002	PUSH KNOB
	K24	CM46115-003	POWER KNOB
	K25	CM47853-006	VOLUME KNOB
	K26	CM47947-002	SPEAKER NET
	K27	CM48005-001	LINKAGE BUSHING
	G5	CM48038-001	LED HOLDER
	K28	CM48199-A01	PANASONIC BADGE
	K29	CN40054-00F	FOOT
	G6	CP11224-052	CARTON
	G7	CP11441-A0A	CUSHION
	G8	CP20714-001	POWER CORD CASE
	G9	CP30974-005	SET COVER
	G10	CP30975-001	BAG
	G11	CP40248-001	TOP COVER
	G12	LCT0051-001A	INSTRUCTION BOOK
⚠	K30	M48JBY02X/E	COLOR PICTURE TUBE
	K31	NFS5000Z	NUT
⚠	K32	QMCB004-001	3P INLET
⚠	G13	QMPP010200JC	POWER CORD (For EN)
⚠	G14	QMP4908-200K	POWER CORD (For UK)
	G15	QPGA01503005	BAG
	K33	Q03091-152	WASHER
	K34	SBSF4012Z	SCREW
	K35	9050-03T	SPEAKER
		INTEGRATED CIRCUITS	
	ICM001	CXD2018Q	MOS IC (OTHER LOGIC)
	ICM101	UPC358G-W	LINEAR IC
	ICM102	UPC358G-W	LINEAR IC
	IC1101	TC4053BP	MOS IC (CMOS LOGIC)
	IC1201	AN5625N	LINEAR IC
	IC1202	TC4053BP	MOS IC (CMOS LOGIC)
	IC1203	AN5640	LINEAR IC
	IC1204	UPC358HA	LINEAR IC
	IC1301	UPC358HA	LINEAR IC
	IC1302	UPC358HA	LINEAR IC
	IC1303	UPC358HA	LINEAR IC
	IC1304	TC4053BP	MOS IC (CMOS LOGIC)
	IC1305	TC4053BP	MOS IC (CMOS LOGIC)

	Ref. No.	Part No.	Description
	IC1401	TDA4672	LINEAR IC
	IC1402	TDA4680/V6	LINEAR IC
	IC1403	AN7808	LINEAR IC
	IC1501	TC4053BP	MOS IC (CMOS LOGIC)
	IC1502	TC4538BP	MOS IC (CMOS S/LOGIC)
	IC1503	TC4538BP	MOS IC (CMOS S/LOGIC)
	IC1504	TC4538BP	MOS IC (CMOS S/LOGIC)
	IC1505	TC4538BP	MOS IC (CMOS S/LOGIC)
	IC1506	TC4538BP	MOS IC (CMOS S/LOGIC)
	IC1507	TC4538BP	MOS IC (CMOS S/LOGIC)
	IC1508	TC4538BP	MOS IC (CMOS S/LOGIC)
	IC1509	TC4053BP	MOS IC (CMOS LOGIC)
	IC1510	HD74LS00P	MOS IC (TTL)
	IC1511	HD74LS05P	MOS IC (TTL)
	IC1601	AN5265	LINEAR IC
	IC2301	NJM4560D	LINEAR IC
	IC2303	AN79L05-Y	LINEAR IC
	IC2401	UPC1498H	LINEAR IC
	IC2403	NJM4560D	LINEAR IC
	IC2404	AN7812F	LINEAR IC
	IC2405	TA79012S	LINEAR IC
	IC2406	TA78L009APY	LINEAR IC
	IC2407	AN7812F	LINEAR IC
	IC2408	AN7805F	LINEAR IC
	IC2501	HA11423	LINEAR IC
	IC2551	TC4066BP	MOS IC (CMOS LOGIC)
	IC2553	TC4538BP	MOS IC (CMOS S/LOGIC)
	IC2554	LM2940CT-12	LINEAR IC
	IC2555	AN7812F	LINEAR IC
	IC2601	NJM4560D	LINEAR IC
	IC5101	MB89647PF140	MOS IC (8BIT)
	IC5102	MB90077PF109	MOS IC (OTHER LOGIC)
	IC5103	ST24BM-1400	MOS IC (EEP ROM)
	IC5105	GP1U781Q	HYBRID IC
	IC5106	HD74HC158FP	MOS IC (CMOS S/LOGIC)
	IC5108	HD74HC32FP	MOS IC (CMOS S/LOGIC)
	IC5401	UPC4558G-W	LINEAR IC
	IC6201	LA7016	LINEAR IC
	IC6601	TC4066BP	MOS IC (CMOS LOGIC)
	IC6701	TC4053BP	MOS IC (CMOS LOGIC)
	IC6801	HD74LS04P	MOS IC (TTL)
⚠	IC9001	FA5301BP	LINEAR IC

TRANSISTORS

	Q1101	2SC2712(YG)	TRANSISTOR
	Q1102	2SC2712(YG)	TRANSISTOR
	Q1103	2SC2712(YG)	TRANSISTOR
	Q1104	2SC2712(YG)	TRANSISTOR
	Q1105	2SC2712(YG)	TRANSISTOR
	Q1106	2SA1162YG	TRANSISTOR
	Q1107	2SA1162YG	TRANSISTOR
	Q1108	2SC2712(YG)	TRANSISTOR
	Q1109	2SC2712(YG)	TRANSISTOR
	Q1110	2SC2712(YG)	TRANSISTOR
	Q1111	2SC2712(YG)	TRANSISTOR
	Q1112	2SC2712(YG)	TRANSISTOR
	Q1113	2SC2712(YG)	TRANSISTOR
	Q1114	2SC2712(YG)	TRANSISTOR
	Q1115	2SC2712(YG)	TRANSISTOR
	Q1116	2SA1162YG	TRANSISTOR
	Q1117	2SA1162YG	TRANSISTOR
	Q1118	2SC2712(YG)	TRANSISTOR
	Q1201	2SC2712(YG)	TRANSISTOR
	Q1202	2SC2712(YG)	TRANSISTOR
	Q1203	2SC2712(YG)	TRANSISTOR
	Q1204	2SC2712(YG)	TRANSISTOR
	Q1205	2SC2712(YG)	TRANSISTOR
	Q1206	2SC2712(YG)	TRANSISTOR
	Q1207	2SC2712(YG)	TRANSISTOR
	Q1208	2SC2712(YG)	TRANSISTOR
	Q1210	2SC2712(YG)	TRANSISTOR
	Q1212	2SC2712(YG)	TRANSISTOR
	Q1301	2SC2712(YG)	TRANSISTOR
	Q1302	2SC2712(YG)	TRANSISTOR
	Q1303	2SK374	FET
	Q1304	2SC2712(YG)	TRANSISTOR
	Q1305	2SC2712(YG)	TRANSISTOR
	Q1306	2SC2712(YG)	TRANSISTOR
	Q1307	2SA1162YG	TRANSISTOR
	Q1308	2SC2712(YG)	TRANSISTOR
	Q1331	2SC2712(YG)	TRANSISTOR
	Q1332	2SC2712(YG)	TRANSISTOR
	Q1333	2SK374	FET
	Q1334	2SC2712(YG)	TRANSISTOR
	Q1361	2SC2712(YG)	TRANSISTOR
	Q1362	2SC2712(YG)	TRANSISTOR
	Q1363	2SK374	FET
	Q1364	2SC2712(YG)	TRANSISTOR
	Q1451	2SC2712(YG)	TRANSISTOR
	Q1452	2SC2712(YG)	TRANSISTOR
	Q1453	2SC2712(YG)	TRANSISTOR
	Q1454	2SA1162YG	TRANSISTOR
	Q1455	2SC2712(YG)	TRANSISTOR
	Q1456	2SC2712(YG)	TRANSISTOR
	Q1457	2SC2712(YG)	TRANSISTOR
	Q1458	2SC2712(YG)	TRANSISTOR
	Q1459	2SC2712(YG)	TRANSISTOR
	Q1460	2SC2712(YG)	TRANSISTOR
	Q1461	2SC2712(YG)	TRANSISTOR
	Q1462	2SC2712(YG)	TRANSISTOR
	Q1501	2SA1162YG	TRANSISTOR
	Q1502	2SC2712(YG)	TRANSISTOR
	Q1503	2SC2712(YG)	TRANSISTOR
	Q1504	2SC2712(YG)	TRANSISTOR
	Q1505	2SC2712(YG)	TRANSISTOR
	Q1506	2SA1162YG	TRANSISTOR
	Q1507	2SC2712(YG)	TRANSISTOR
	Q1508	2SC2712(YG)	TRANSISTOR
	Q1509	2SC2712(YG)	TRANSISTOR
	Q1510	2SA1162YG	TRANSISTOR
	Q1511	2SC2712(YG)	TRANSISTOR
	Q1512	2SC2712(YG)	TRANSISTOR
	Q1513	2SC2712(YG)	TRANSISTOR
	Q1514	2SC2712(YG)	TRANSISTOR
	Q1515	2SC2712(YG)	TRANSISTOR
	Q2301	2SC4632	TRANSISTOR
	Q2302	2SC1815Y	TRANSISTOR
	Q2303	2SC1815Y	TRANSISTOR
	Q2304	2SC1815Y	TRANSISTOR
	Q2401	2SC3311A	TRANSISTOR
	Q2402	2SC1815Y	TRANSISTOR
	Q2403	2SC1815Y	TRANSISTOR
	Q2404	2SC1815Y	TRANSISTOR
	Q2405	2SC1815Y	TRANSISTOR
	Q2501	2SC3187	TRANSISTOR
⚠	Q2502	2SC4589	TRANSISTOR
	Q2504	2SA1309AR	TRANSISTOR
	Q2506	2SC1815Y	TRANSISTOR
	Q2510	2SA1309AR	TRANSISTOR
	Q2511	2SD1408(0Y)	TRANSISTOR
	Q2551	2SC1815Y	TRANSISTOR
	Q2552	2SC1815Y	TRANSISTOR
	Q2554	2SC1815Y	TRANSISTOR
	Q2556	2SC1815Y	TRANSISTOR
	Q2601	2SC1959(Y)-T	TRANSISTOR

	Ref. No.	Part No.	Description
	Q2603	2SC1959(Y)-T	TRANSISTOR
	Q2701	2SC1815Y	TRANSISTOR
	Q3301	2SC4502	TRANSISTOR
	Q3302	2SC4502	TRANSISTOR
	Q3303	2SC4502	TRANSISTOR
	Q3304	2SC4544	TRANSISTOR
	Q3305	2SC4544	TRANSISTOR
	Q3306	2SC4544	TRANSISTOR
	Q3307	2SA1321	TRANSISTOR
	Q3308	2SA1321	TRANSISTOR
	Q3309	2SA1321	TRANSISTOR
	Q3310	2SC3334	TRANSISTOR
	Q3311	2SC3334	TRANSISTOR
	Q3312	2SC3334	TRANSISTOR
	Q3501	2SC1505	TRANSISTOR
	Q5101	2SC2712(YG)	TRANSISTOR
	Q5102	2SC2712(YG)	TRANSISTOR
	Q5103	2SC2712(YG)	TRANSISTOR
	Q5104	2SC2712(YG)	TRANSISTOR
	Q5105	2SC2712(YG)	TRANSISTOR
	Q5106	2SC2712(YG)	TRANSISTOR
	Q5201	2SC2712(YG)	TRANSISTOR
	Q5202	2SA1162YG	TRANSISTOR
	Q5203	2SC2712(YG)	TRANSISTOR
	Q5204	2SA1162YG	TRANSISTOR
	Q5205	2SC2712(YG)	TRANSISTOR
	Q5206	2SA1162YG	TRANSISTOR
	Q5207	2SC2712(YG)	TRANSISTOR
	Q5208	2SC2712(YG)	TRANSISTOR
	Q5209	2SC2712(YG)	TRANSISTOR
	Q5210	2SC2712(YG)	TRANSISTOR
	Q5301	2SA1162YG	TRANSISTOR
	Q5302	2SA1162YG	TRANSISTOR
	Q5303	2SA1162YG	TRANSISTOR
	Q5304	2SC2712(YG)	TRANSISTOR
	Q5401	2SC2712(YG)	TRANSISTOR
	Q6201	2SC1740S	TRANSISTOR
	Q6202	2SC1740S	TRANSISTOR
	Q6203	2SC1740S	TRANSISTOR
	Q6204	2SC1740S	TRANSISTOR
	Q6206	2SC1740S	TRANSISTOR
	Q6211	2SK301(Q)-T	FET
	Q6301	2SC1740S	TRANSISTOR
	Q6302	2SC1740S	TRANSISTOR
	Q6303	2SC1740S	TRANSISTOR
	Q6601	2SC1740S	TRANSISTOR
	Q6602	2SC1740S	TRANSISTOR
	Q6603	2SC1740S	TRANSISTOR
	Q6604	2SC1740S	TRANSISTOR
	Q6605	2SC1740S	TRANSISTOR
	Q6606	2SC1740S	TRANSISTOR
	Q6701	2SC1740S	TRANSISTOR
	Q6702	2SC1740S	TRANSISTOR
	Q6703	2SC1740S	TRANSISTOR
	Q6704	2SC1740S	TRANSISTOR
	Q6706	2SC1740S	TRANSISTOR
	Q6707	2SA933S	TRANSISTOR
	Q6708	2SC1740S	TRANSISTOR
	Q6709	2SC1740S	TRANSISTOR
	Q6711	2SC1740S	TRANSISTOR
	Q6712	2SA933S	TRANSISTOR
	Q6713	2SC1740S	TRANSISTOR
	Q6714	2SC1740S	TRANSISTOR
	Q6716	2SC1740S	TRANSISTOR
	Q6717	2SC1740S	TRANSISTOR
	Q6718	2SC1740S	TRANSISTOR
	Q6719	2SC1740S	TRANSISTOR
	Q6720	2SC1740S	TRANSISTOR
	Q9001	2SC1959(Y)-T	TRANSISTOR
	Q9002	2SC1959(Y)-T	TRANSISTOR
	Q9003	2SA562TM	TRANSISTOR
⚠	Q9004	2SK1118	FET
	Q9005	2SD1409	TRANSISTOR
	Q9006	2SC1959(Y)-T	TRANSISTOR
	Q9008	2SA1370(E)	TRANSISTOR
	Q9012	2SC1472K(AB)	TRANSISTOR

DIODES

	Ref. No.	Part No.	Description
	DM101	MA111	DIODE
	D1101	MA151K	DIODE
	D1201	MA151K	DIODE
	D1202	MA151K	DIODE
	D1203	MA151K	DIODE
	D1451	MA3082M	ZENER DIODE
	D1452	MA3082M	ZENER DIODE
	D1453	MA3082M	ZENER DIODE
	D1454	MA3082M	ZENER DIODE
	D1455	MA3082M	ZENER DIODE
	D1456	MA3082M	ZENER DIODE
	D1501	MA151K	DIODE
	D1552	1SS133	DIODE
	D1553	1SS133	DIODE
	D1554	MA151K	DIODE
	D1702	1SS81	DIODE
	D2301	RU4DS	DIODE
	D2302	1SS133	DIODE
	D2303	MA4062M	ZENER DIODE
	D2304	1SS133	DIODE
	D2305	RD9.1E	ZENER DIODE
	D2306	1SS133	DIODE
	D2307	1SS133	DIODE
	D2308	1SS133	DIODE
	D2309	1SS133	DIODE
	D2310	RD3.3E	ZENER DIODE
	D2401	1SS133	DIODE
	D2402	TVSRGP10J	DIODE
	D2404	RU30	DIODE
	D2405	RD3.9ES(B2)	ZENER DIODE
	D2406	RD75EB	DIODE
	D2407	1SS133	DIODE
	D2408	1SS133	DIODE
⚠	D2501	ERD07-15	DIODE
	D2502	1SS133	DIODE
	D2503	RD11E	ZENER DIODE
	D2504	ERD07-15	DIODE
	D2505	ERD07-15	DIODE
	D2506	RU3AM	DIODE
	D2507	RU3AM	DIODE
	D2509	RU4AM	DIODE
	D2510	MA165	DIODE
	D2511	RU3AM	DIODE
	D2512	1SS81	DIODE
	D2513	MA4220M	ZENER DIODE
	D2515	LD-1203DU	LED
	D2601	1SS81	DIODE
	D2602	1SS81	DIODE
	D2603	MA4047M	ZENER DIODE
⚠	D2701	RD6.8E	DIODE
	D2702	1SS83	DIODE
	D2703	1SS133	DIODE
	D2704	1SS133	DIODE
	D2705	1SS146	DIODE
	D2706	MA4110M	ZENER DIODE
	D2708	1SS133	DIODE
	D2709	1SS146	DIODE

Ref. No.	Part No.	Description
D2711	1SS133	DIODE
D3301	MA165	DIODE
D3302	MA165	DIODE
D3303	MA165	DIODE
D3304	1SS83	DIODE
D3305	1SS83	DIODE
D3306	1SS83	DIODE
D3307	1SS120	DIODE
D3308	1SS120	DIODE
D3309	1SS120	DIODE
D3316	MA4075M	ZENER DIODE
D3501	TVSRGP10J	DIODE
D3502	TVSRGP10J	DIODE
D3503	1SS146	DIODE
D3504	1SS146	DIODE
D4101	MA165	DIODE
D4102	MA165	DIODE
D4103	MA165	DIODE
D4104	MA165	DIODE
D4105	MA165	DIODE
D4106	MA165	DIODE
D4107	MA165	DIODE
D4108	MA165	DIODE
D4109	MA165	DIODE
D4110	MA165	DIODE
D4111	MA165	DIODE
D4112	MA165	DIODE
D4113	MA165	DIODE
D4114	MA165	DIODE
D4115	RD5.6E	ZENER DIODE
D4116	RD5.6E	ZENER DIODE
D4117	RD5.6E	ZENER DIODE
D4118	RD5.6E	ZENER DIODE
D4119	RD5.6E	ZENER DIODE
D4120	GL5KG8	LED
D4121	MA165	DIODE
D4122	MA165	DIODE
D4123	MA165	DIODE
D5101	MA3056L	DIODE
D5102	MA3056L	DIODE
D5103	MA3056L	DIODE
D5104	MA3056L	DIODE
D5105	MA3056L	DIODE
D5106	MA3056L	DIODE
D5107	MA3056L	DIODE
D5108	MA3056L	DIODE
D5109	MA3056L	DIODE
D5110	MA3056L	DIODE
D5111	MA3056L	DIODE
D5112	MA3043	DIODE
D5113	MA151K	DIODE
D5114	MA151K	DIODE
D5301	MA151K	DIODE
D5501	MA3056L	DIODE
D5502	MA3056L	DIODE
D5503	MA3056L	DIODE
D5504	MA3056L	DIODE
D5701	MA3150M	DIODE
D5702	MA3056L	DIODE
D5703	MA3056L	DIODE
D5704	MA3056L	DIODE
D5705	MA3150M	DIODE
D5706	MA3150M	DIODE
D5707	MA3056L	DIODE
D5708	MA3056L	DIODE
D5709	MA3150M	DIODE
D5710	MA3150M	DIODE
D5711	MA3150M	DIODE
D5712	MA8130	ZENER DIODE

Ref. No.	Part No.	Description
D5713	MA3056L	DIODE
D5714	MA8056	DIODE
D5715	MA3056L	DIODE
D5716	MA8056	DIODE
D5717	MA3150M	DIODE
D5718	MA3056L	DIODE
D5719	MA8130	ZENER DIODE
D5720	MA3056L	DIODE
D5721	MA3056L	DIODE
D5722	MA3056L	DIODE
D5723	MA8056	DIODE
D5724	MA3150M	DIODE
D5725	MA8130	ZENER DIODE
D5726	MA3056L	DIODE
D5727	MA8056	DIODE
D5728	MA3056L	DIODE
D5729	MA3056L	DIODE
D5730	MA3056L	DIODE
D5731	MA3056L	DIODE
D5732	MA3056L	DIODE
D6201	1SS133	DIODE
D6202	1SS133	DIODE
D6203	1SS133	DIODE
D6204	1SS133	DIODE
D6205	1SS133	DIODE
D6206	1SS133	DIODE
D6207	1SS133	DIODE
D6208	1SS133	DIODE
D6209	1SS133	DIODE
D6211	1SS133	DIODE
D6212	1SS133	DIODE
D6301	1SS133	DIODE
D6302	1SS133	DIODE
D6303	1SS133	DIODE
D6701	1SS133	DIODE
D6702	1SS133	DIODE
D6703	1SS133	DIODE
D6704	1SS133	DIODE
D6705	1SS133	DIODE
D6706	1SS133	DIODE
D6707	1SS133	DIODE
D6708	1SS133	DIODE
D6709	1SS133	DIODE
D6710	1SS133	DIODE
D6711	1SS133	DIODE
D6712	1SS133	DIODE
D6801	1SS133	DIODE
D6802	1SS133	DIODE
D6803	1SS133	DIODE
D6804	1SS133	DIODE
D6805	1SS133	DIODE
D6806	1SS133	DIODE
D6807	1SS133	DIODE
D6808	1SS133	DIODE
D6809	1SS133	DIODE
D6810	1SS133	DIODE
⚠ D9001	S4VB60	DIODE
D9005	TVSRG2	DIODE
D9006	FML-G12S	DIODE
D9009	1SS133	DIODE
D9010	RL4Z	DIODE
D9012	EU2A	DIODE
D9013	1SS133	DIODE
D9014	1SS133	DIODE
D9016	1SS133	DIODE
D9017	1SS133	DIODE
D9018	RG4C	DIODE
D9019	RG4C	DIODE
D9020	1SS133	DIODE

	Ref. No.	Part No.	Description
	D9021	RD6.8E	DIODE
	D9022	RD6.8E	DIODE
	D9023	MA4110M	ZENER DIODE
	D9024	RD5.6E	ZENER DIODE
	D9026	RD18ES(B3)	ZENER DIODE
	D9027	MA4300M	ZENER DIODE
	D9028	1SS81	DIODE
	D9032	1SS81	DIODE
	D9033	RD3.3E	ZENER DIODE
		COILS	
	LM001	CELP006-4R7Z	PEAKING COIL 4.7U
	LM101	CELP006-4R7Z	PEAKING COIL 4.7U
	L1101	CELP026100Z	PEAKING COIL 10U
	L1102	CELP026150Z	PEAKING COIL 15U
	L1103	CELP0265R6Z	PEAKING COIL 5.6U
	L1104	CELP026270Z	PEAKING COIL 27U
	L1201	CELP0268R2Z	PEAKING COIL 8.2U
	L1202	CELP0268R2Z	PEAKING COIL 8.2U
	L1203	CELP026390Z	PEAKING COIL 39U
	L1204	CELP0264R7Z	PEAKING COIL 4.7U
	L1206	CELP026820Z	PEAKING COIL 82U
	L1207	CELP026820Z	PEAKING COIL 82U
	L1601	CELP0264R7Z	PEAKING COIL 4.7U
	L2501	CELC009003	CHOKE COIL
⚠	L2502	CELL009001	LINIARITY COIL
	L2701	CJ30030026	HEATER CHOKE
	L3301	CELP026-5R6Z	PEAKING COIL 5.6U
	L3302	CELP026-4R7Z	PEAKING COIL 4.7U
	L3303	CELP026-3R9Z	PEAKING COIL 3.9U
	L3304	CELP026-220Z	PEAKING COIL 22U
	L3305	CELP026-180Z	PEAKING COIL 18U
	L3306	CELP026-220Z	PEAKING COIL 22U
	L3501	CELC050562Z	PEAKING COIL 560U
	L5101	CELP008100YL	CHIP COIL
	L5102	CELP008100YL	CHIP COIL
	L5103	CELP008330YL	INDUCTOR
	L6701	CELP026-330Z	PEAKING COIL 33U
	L6702	CELP026-680Z	PEAKING COIL 68U
	L6703	CELP026-330Z	PEAKING COIL 33U
	L6704	CELP026-680Z	PEAKING COIL 68U
	L9901	CELP006-4R7Z	PEAKING COIL 4.7U
	L9902	CJ30030-100	HEATER CHOKE
		TRANSFORMERS	
⚠	T701	CJ28256-00A	FLYBACK TRANS.
	T1101	CE41072001	BAND PASS FILTER
	T1102	CE40176001	PHASE TRANS.
	T1201	CELT034002	BAND PASS FILTER
⚠	T2502	CE42034001	H DRIVE TRANS.
⚠	T9001	CETS031-001	SWITCHING TRANS.
⚠	T9002	CE41856-00A	DRIVE TRANS.
		RESISTORS	
⚠	FR2301	QRH127J182M	F 1.8KOHM, J, 1/2W
⚠	FR2426	QRH127K-R22M	F 0.22 OHM, K, 1/2W
⚠	FR2525	QRH127J1R0M	F 1 OHM, J, 1/2W
⚠	FR2702	QRH127K-R22M	F 0.22 OHM, K, 1/2W
⚠	FR2704	QRH127J4R7M	F 4.7 OHM, J, 1/2W

	Ref. No.	Part No.	Description
⚠	FR9901	QRH127K-R22M	F 0.22 OHM, K, 1/2W
⚠	FR9902	QRH127K-R22M	F 0.22 OHM, K, 1/2W
⚠	FR9903	QRH127K-R22M	F 0.22 OHM, K, 1/2W
	RM001	QRSA08J101YL	M 100 OHM, J, 1/10W
	RM002	QRSA08J101YL	M 100 OHM, J, 1/10W
	RM003	QRSA08J102YL	M 1KOHM, J, 1/10W
	RM004	QRSA08J102YL	M 1KOHM, J, 1/10W
	RM005	QRSA08J334YL	M 330KOHM, J, 1/10W
	RM006	QRSA08J123YL	M 12KOHM, J, 1/10W
	RM007	QRSA08J101YL	M 100 OHM, J, 1/10W
	RM101	QRSA08J563YL	M 56KOHM, J, 1/10W
	RM102	QRSA08J103YL	M 10KOHM, J, 1/10W
	RM103	QRSA08J101YL	M 100 OHM, J, 1/10W
	RM104	QRSA08J472YL	M 4.7KOHM, J, 1/10W
	RM105	QRSA08J103YL	M 10KOHM, J, 1/10W
	RM106	QRSA08J333YL	M 33KOHM, J, 1/10W
	RM107	QRSA08J333YL	M 33KOHM, J, 1/10W
	RM108	QRSA08J101YL	M 100 OHM, J, 1/10W
	RM109	QRSA08J101YL	M 100 OHM, J, 1/10W
	RM110	QRSA08J101YL	M 100 OHM, J, 1/10W
	RM111	QRSA08J101YL	M 100 OHM, J, 1/10W
	RM112	QRSA08J101YL	M 100 OHM, J, 1/10W
	RM113	QRSA08J104YL	M 100KOHM, J, 1/10W
	R1002	QRSA08J0R0YL	M 0 OHM, J, 1/10W
	R1003	QRSA08J0R0YL	M 0 OHM, J, 1/10W
	R1004	QRSA08J0R0YL	M 0 OHM, J, 1/10W
	R1005	QRSA08J0R0YL	M 0 OHM, J, 1/10W
	R1006	QRSA08J0R0YL	M 0 OHM, J, 1/10W
	R1008	QRSA08J0R0YL	M 0 OHM, J, 1/10W
	R1010	QRSA08J0R0YL	M 0 OHM, J, 1/10W
	R1011	QRSA08J0R0YL	M 0 OHM, J, 1/10W
	R1012	QRSA08J0R0YL	M 0 OHM, J, 1/10W
	R1013	QRSA08J0R0YL	M 0 OHM, J, 1/10W
	R1015	QRSA08J0R0YL	M 0 OHM, J, 1/10W
	R1020	QRSA08J0R0YL	M 0 OHM, J, 1/10W
	R1022	QRSA08J0R0YL	M 0 OHM, J, 1/10W
	R1023	QRSA08J0R0YL	M 0 OHM, J, 1/10W
	R1024	QRSA08J0R0YL	M 0 OHM, J, 1/10W
	R1025	QRSA08J0R0YL	M 0 OHM, J, 1/10W
	R1026	QRSA08J0R0YL	M 0 OHM, J, 1/10W
	R1027	QRSA08J0R0YL	M 0 OHM, J, 1/10W
	R1028	QRSA08J0R0YL	M 0 OHM, J, 1/10W
	R1029	QRSA08J0R0YL	M 0 OHM, J, 1/10W
	R1030	QRSA08J0R0YL	M 0 OHM, J, 1/10W
	R1031	QRSA08J0R0YL	M 0 OHM, J, 1/10W
	R1032	QRSA08J0R0YL	M 0 OHM, J, 1/10W
	R1033	QRSA08J0R0YL	M 0 OHM, J, 1/10W
	R1034	QRSA08J0R0YL	M 0 OHM, J, 1/10W
	R1035	QRSA08J0R0YL	M 0 OHM, J, 1/10W
	R1036	QRSA08J0R0YL	M 0 OHM, J, 1/10W
	R1037	QRSA08J0R0YL	M 0 OHM, J, 1/10W
	R1038	QRSA08J0R0YL	M 0 OHM, J, 1/10W
	R1051	QRSA08J0R0YL	M 0 OHM, J, 1/10W
	R1052	QRSA08J332YL	M 3.3KOHM, J, 1/10W
	R1053	QRSA08J0R0YL	M 0 OHM, J, 1/10W
	R1055	QRSA08J0R0YL	M 0 OHM, J, 1/10W
	R1056	QRSA08J0R0YL	M 0 OHM, J, 1/10W
	R1057	QRSA08J822YL	M 8.2KOHM, J, 1/10W
	R1058	QRSA08J123YL	M 12KOHM, J, 1/10W
	R1101	QRSA08J222YL	M 2.2KOHM, J, 1/10W
	R1102	QRSA08J102YL	M 1KOHM, J, 1/10W
	R1103	QRSA08J472YL	M 4.7KOHM, J, 1/10W
	R1104	QRSA08J122YL	M 1.2KOHM, J, 1/10W
	R1105	QRSA08J561YL	M 560 OHM, J, 1/10W
	R1106	QRSA08J681YL	M 680 OHM, J, 1/10W
	R1107	QVPC611202HZ	CONTROL 20KOHMB
	R1108	QRSA08J470YL	M 47 OHM, J, 1/10W
	R1109	QRSA08J271YL	M 270 OHM, J, 1/10W
	R1110	QRSA08J122YL	M 1.2KOHM, J, 1/10W

Ref. No.	Part No.	Description
R1111	QRSA08J271YL	M 270 OHM, J, 1/10W
R1112	QRSA08J102YL	M 1KOHM, J, 1/10W
R1113	QRSA08J681YL	M 680 OHM, J, 1/10W
R1114	QRSA08J102YL	M 1KOHM, J, 1/10W
R1115	QRSA08J681YL	M 680 OHM, J, 1/10W
R1116	QRSA08J122YL	M 1.2KOHM, J, 1/10W
R1117	QVPC611501HZ	CONTROL 500 OHMB
R1118	QRSA08J102YL	M 1KOHM, J, 1/10W
R1119	QRSA08J102YL	M 1KOHM, J, 1/10W
R1120	QVPC611202HZ	CONTROL 20KOHMB
R1121	QRSA08J471YL	M 470 OHM, J, 1/10W
R1122	QRSA08J102YL	M 1KOHM, J, 1/10W
R1123	QRSA08J681YL	M 680 OHM, J, 1/10W
R1124	QRSA08J182YL	M 1.8KOHM, J, 1/10W
R1125	QRSA08J681YL	M 680 OHM, J, 1/10W
R1126	QRSA08J562YL	M 5.6KOHM, J, 1/10W
R1127	QRSA08J182YL	M 1.8KOHM, J, 1/10W
R1128	QRSA08J822YL	M 8.2KOHM, J, 1/10W
R1129	QRSA08J183YL	M 18KOHM, J, 1/10W
R1130	QRSA08J182YL	M 1.8KOHM, J, 1/10W
R1131	QRSA08J122YL	M 1.2KOHM, J, 1/10W
R1132	QRSA08J0R0YL	M 0 OHM, J, 1/10W
R1133	QRD162J562	C 5.6KOHM, J, 1/6W
R1134	QRSA08J183YL	M 18KOHM, J, 1/10W
R1135	QRSA08J223YL	M 22KOHM, J, 1/10W
R1136	QRSA08J561YL	M 560 OHM, J, 1/10W
R1137	QRSA08J561YL	M 560 OHM, J, 1/10W
R1139	QRSA08J562YL	M 5.6KOHM, J, 1/10W
R1140	QRSA08J102YL	M 1KOHM, J, 1/10W
R1141	QRSA08J102YL	M 1KOHM, J, 1/10W
R1142	QRSA08J102YL	M 1KOHM, J, 1/10W
R1143	QRSA08J102YL	M 1KOHM, J, 1/10W
R1144	QRSA08J472YL	M 4.7KOHM, J, 1/10W
R1145	QRSA08J272YL	M 2.7KOHM, J, 1/10W
R1146	QRSA08J273YL	M 27KOHM, J, 1/10W
R1147	QRSA08J472YL	M 4.7KOHM, J, 1/10W
R1148	QRSA08J332YL	M 3.3KOHM, J, 1/10W
R1149	QRSA08J683YL	M 68KOHM, J, 1/10W
R1150	QRSA08J273YL	M 27KOHM, J, 1/10W
R1151	QRSA08J101YL	M 100 OHM, J, 1/10W
R1201	QRSA08J392YL	M 3.9KOHM, J, 1/10W
R1202	QRSA08J392YL	M 3.9KOHM, J, 1/10W
R1203	QRSA08J102YL	M 1KOHM, J, 1/10W
R1204	QRSA08J102YL	M 1KOHM, J, 1/10W
R1205	QRSA08J122YL	M 1.2KOHM, J, 1/10W
R1206	QRSA08J332YL	M 3.3KOHM, J, 1/10W
R1207	QRSA08J391YL	M 390 OHM, J, 1/10W
R1208	QRSA08J681YL	M 680 OHM, J, 1/10W
R1209	QRSA08J471YL	M 470 OHM, J, 1/10W
R1210	QVPC611202HZ	CONTROL 20KOHMB
R1211	QRSA08J562YL	M 5.6KOHM, J, 1/10W
R1212	QRSA08J682YL	M 6.8KOHM, J, 1/10W
R1213	QRSA08J273YL	M 27KOHM, J, 1/10W
R1214	QRSA08J273YL	M 27KOHM, J, 1/10W
R1215	QRSA08J123YL	M 12KOHM, J, 1/10W
R1216	QRSA08J562YL	M 5.6KOHM, J, 1/10W
R1217	QRSA08J224YL	M 220KOHM, J, 1/10W
R1218	QRSA08J103YL	M 10KOHM, J, 1/10W
R1219	QRSA08J223YL	M 22KOHM, J, 1/10W
R1220	QRSA08J684YL	M 680KOHM, J, 1/10W
R1221	QRSA08J102YL	M 1KOHM, J, 1/10W
R1222	QRSA08J681YL	M 680 OHM, J, 1/10W
R1223	QRSA08J122YL	M 1.2KOHM, J, 1/10W
R1224	QRSA08J272YL	M 2.7KOHM, J, 1/10W
R1225	QRSA08J122YL	M 1.2KOHM, J, 1/10W
R1226	QRSA08J272YL	M 2.7KOHM, J, 1/10W
R1227	QRSA08J102YL	M 1KOHM, J, 1/10W
R1228	QRSA08J102YL	M 1KOHM, J, 1/10W
R1229	QRSA08J152YL	M 1.5KOHM, J, 1/10W

Ref. No.	Part No.	Description
R1230	QRSA08J332YL	M 3.3KOHM, J, 1/10W
R1231	QRSA08J332YL	M 3.3KOHM, J, 1/10W
R1232	QRSA08J102YL	M 1KOHM, J, 1/10W
R1233	QRSA08J152YL	M 1.5KOHM, J, 1/10W
R1234	QRSA08J152YL	M 1.5KOHM, J, 1/10W
R1235	QRSA08J332YL	M 3.3KOHM, J, 1/10W
R1236	QRSA08J332YL	M 3.3KOHM, J, 1/10W
R1237	QRSA08J472YL	M 4.7KOHM, J, 1/10W
R1238	QRSA08J153YL	M 15KOHM, J, 1/10W
R1239	QRSA08J472YL	M 4.7KOHM, J, 1/10W
R1240	QRSA08J104YL	M 100KOHM, J, 1/10W
R1241	QRSA08J153YL	M 15KOHM, J, 1/10W
R1242	QRSA08J272YL	M 2.7KOHM, J, 1/10W
R1243	QRSA08J272YL	M 2.7KOHM, J, 1/10W
R1244	QRSA08J122YL	M 1.2KOHM, J, 1/10W
R1245	QRSA08J123YL	M 12KOHM, J, 1/10W
R1246	QRSA08J182YL	M 1.8KOHM, J, 1/10W
R1247	QRSA08J104YL	M 100KOHM, J, 1/10W
R1248	QRSA08J123YL	M 12KOHM, J, 1/10W
R1249	QRSA08J822YL	M 8.2KOHM, J, 1/10W
R1250	QRSA08J122YL	M 1.2KOHM, J, 1/10W
R1251	QRSA08J122YL	M 1.2KOHM, J, 1/10W
R1252	QRSA08J222YL	M 2.2KOHM, J, 1/10W
R1254	QRSA08J683YL	M 68KOHM, J, 1/10W
R1256	QRSA08J123YL	M 12KOHM, J, 1/10W
R1257	QRSA08J123YL	M 12KOHM, J, 1/10W
R1258	QRSA08J123YL	M 12KOHM, J, 1/10W
R1259	QRSA08J123YL	M 12KOHM, J, 1/10W
R1260	QRSA08J273YL	M 27KOHM, J, 1/10W
R1301	QRSA08J273YL	M 27KOHM, J, 1/10W
R1302	QRSA08J153YL	M 15KOHM, J, 1/10W
R1303	QRSA08J102YL	M 1KOHM, J, 1/10W
R1304	QRSA08J471YL	M 470 OHM, J, 1/10W
R1305	QRSA08J102YL	M 1KOHM, J, 1/10W
R1306	QRSA08J102YL	M 1KOHM, J, 1/10W
R1307	QRSA08J105YL	M 1MOHM, J, 1/10W
R1308	QRSA08J103YL	M 10KOHM, J, 1/10W
R1309	QRSA08J103YL	M 10KOHM, J, 1/10W
R1310	QRSA08J123YL	M 12KOHM, J, 1/10W
R1311	QRSA08J103YL	M 10KOHM, J, 1/10W
R1312	QRSA08J103YL	M 10KOHM, J, 1/10W
R1313	QRSA08J102YL	M 1KOHM, J, 1/10W
R1314	QRSA08J152YL	M 1.5KOHM, J, 1/10W
R1315	QRSA08J273YL	M 27KOHM, J, 1/10W
R1316	QRSA08J183YL	M 18KOHM, J, 1/10W
R1317	QRSA08J182YL	M 1.8KOHM, J, 1/10W
R1318	QRSA08J332YL	M 3.3KOHM, J, 1/10W
R1319	QRSA08J274YL	M 270KOHM, J, 1/10W
R1320	QRSA08J123YL	M 12KOHM, J, 1/10W
R1321	QRSA08J123YL	M 12KOHM, J, 1/10W
R1322	QRSA08J123YL	M 12KOHM, J, 1/10W
R1331	QRSA08J273YL	M 27KOHM, J, 1/10W
R1332	QRSA08J153YL	M 15KOHM, J, 1/10W
R1333	QRSA08J102YL	M 1KOHM, J, 1/10W
R1334	QRSA08J391YL	M 390 OHM, J, 1/10W
R1335	QRSA08J102YL	M 1KOHM, J, 1/10W
R1336	QRSA08J102YL	M 1KOHM, J, 1/10W
R1337	QRSA08J105YL	M 1MOHM, J, 1/10W
R1338	QRSA08J103YL	M 10KOHM, J, 1/10W
R1339	QRSA08J103YL	M 10KOHM, J, 1/10W
R1340	QRSA08J123YL	M 12KOHM, J, 1/10W
R1341	QRSA08J103YL	M 10KOHM, J, 1/10W
R1342	QRSA08J103YL	M 10KOHM, J, 1/10W
R1343	QRSA08J102YL	M 1KOHM, J, 1/10W
R1344	QRSA08J272YL	M 2.7KOHM, J, 1/10W
R1345	QRSA08J123YL	M 12KOHM, J, 1/10W
R1346	QRSA08J393YL	M 39KOHM, J, 1/10W
R1361	QRSA08J273YL	M 27KOHM, J, 1/10W

Ref. No.	Part No.	Description
R1362	QRSA08J153YL	M 15KOHM, J, 1/10W
R1363	QRSA08J102YL	M 1KOHM, J, 1/10W
R1364	QRSA08J391YL	M 390 OHM, J, 1/10W
R1365	QRSA08J102YL	M 1KOHM, J, 1/10W
R1366	QRSA08J102YL	M 1KOHM, J, 1/10W
R1367	QRSA08J105YL	M 1MOHM, J, 1/10W
R1368	QRSA08J103YL	M 10KOHM, J, 1/10W
R1369	QRSA08J103YL	M 10KOHM, J, 1/10W
R1370	QRSA08J123YL	M 12KOHM, J, 1/10W
R1371	QRSA08J103YL	M 10KOHM, J, 1/10W
R1372	QRSA08J103YL	M 10KOHM, J, 1/10W
R1373	QRSA08J102YL	M 1KOHM, J, 1/10W
R1374	QRSA08J272YL	M 2.7KOHM, J, 1/10W
R1375	QRSA08J153YL	M 15KOHM, J, 1/10W
R1376	QRSA08J333YL	M 33KOHM, J, 1/10W
R1381	QRSA08J123YL	M 12KOHM, J, 1/10W
R1382	QRSA08J123YL	M 12KOHM, J, 1/10W
R1383	QRSA08J273YL	M 27KOHM, J, 1/10W
R1401	QRSA08J101YL	M 100 OHM, J, 1/10W
R1402	QRSA08J101YL	M 100 OHM, J, 1/10W
R1403	QRSA08J102YL	M 1KOHM, J, 1/10W
R1404	QRSA08J102YL	M 1KOHM, J, 1/10W
R1405	QRSA08J102YL	M 1KOHM, J, 1/10W
R1406	QRSA08J123YL	M 12KOHM, J, 1/10W
R1407	QRSA08J273YL	M 27KOHM, J, 1/10W
R1408	QRSA08J273YL	M 27KOHM, J, 1/10W
R1409	QRSA08J273YL	M 27KOHM, J, 1/10W
R1410	QRSA08J273YL	M 27KOHM, J, 1/10W
R1451	QRSA08J272YL	M 2.7KOHM, J, 1/10W
R1453	QRSA08J103YL	M 10KOHM, J, 1/10W
R1454	QRSA08J222YL	M 2.2KOHM, J, 1/10W
R1455	QRSA08J823YL	M 82KOHM, J, 1/10W
R1456	QRSA08J102YL	M 1KOHM, J, 1/10W
R1457	QRSA08J102YL	M 1KOHM, J, 1/10W
R1458	QRSA08J392YL	M 3.9KOHM, J, 1/10W
R1459	QRSA08J0R0YL	M 0 OHM, J, 1/10W
R1460	QRSA08J183YL	M 18KOHM, J, 1/10W
R1461	QRSA08J153YL	M 15KOHM, J, 1/10W
R1462	QRSA08J122YL	M 1.2KOHM, J, 1/10W
R1463	QRSA08J122YL	M 1.2KOHM, J, 1/10W
R1464	QRSA08J122YL	M 1.2KOHM, J, 1/10W
R1465	QRSA08J101YL	M 100 OHM, J, 1/10W
R1466	QRSA08J101YL	M 100 OHM, J, 1/10W
R1467	QRSA08J101YL	M 100 OHM, J, 1/10W
R1469	QRSA08J393YL	M 39KOHM, J, 1/10W
R1470	QRSA08J273YL	M 27KOHM, J, 1/10W
R1471	QRSA08J273YL	M 27KOHM, J, 1/10W
R1472	QRSA08J273YL	M 27KOHM, J, 1/10W
R1473	QRSA08J123YL	M 12KOHM, J, 1/10W
R1474	QRSA08J273YL	M 27KOHM, J, 1/10W
R1501	QRSA08J273YL	M 27KOHM, J, 1/10W
R1502	QRSA08J153YL	M 15KOHM, J, 1/10W
R1503	QRSA08J122YL	M 1.2KOHM, J, 1/10W
R1504	QRSA08J272YL	M 2.7KOHM, J, 1/10W
R1505	QRSA08J473YL	M 47KOHM, J, 1/10W
R1506	QRSA08J393YL	M 39KOHM, J, 1/10W
R1507	QRSA08J182YL	M 1.8KOHM, J, 1/10W
R1508	QRSA08J123YL	M 12KOHM, J, 1/10W
R1509	QRSA08J271YL	M 270 OHM, J, 1/10W
R1510	QRSA08J472YL	M 4.7KOHM, J, 1/10W
R1511	QRSA08J820YL	M 82 OHM, J, 1/10W
R1512	QRSA08J820YL	M 82 OHM, J, 1/10W
R1513	QRSA08J121YL	M 120 OHM, J, 1/10W
R1514	QRSA08J332YL	M 3.3KOHM, J, 1/10W
R1515	QRSA08J333YL	M 33KOHM, J, 1/10W
R1516	QRSA08J472YL	M 4.7KOHM, J, 1/10W
R1517	QRSA08J222YL	M 2.2KOHM, J, 1/10W
R1518	QRSA08J331YL	M 330 OHM, J, 1/10W
R1519	QRSA08J332YL	M 3.3KOHM, J, 1/10W

Ref. No.	Part No.	Description
R1520	QRSA08J102YL	M 1KOHM, J, 1/10W
R1521	QRSA08J332YL	M 3.3KOHM, J, 1/10W
R1522	QRSA08J122YL	M 1.2KOHM, J, 1/10W
R1523	QRSA08J473YL	M 47KOHM, J, 1/10W
R1524	QRSA08J272YL	M 2.7KOHM, J, 1/10W
R1525	QRSA08J101YL	M 100 OHM, J, 1/10W
R1526	QRSA08J272YL	M 2.7KOHM, J, 1/10W
R1527	QRSA08J103YL	M 10KOHM, J, 1/10W
R1528	QRSA08J102YL	M 1KOHM, J, 1/10W
R1529	QRSA08J273YL	M 27KOHM, J, 1/10W
R1530	QRSA08J682YL	M 6.8KOHM, J, 1/10W
R1531	QRSA08J472YL	M 4.7KOHM, J, 1/10W
R1533	QRSA08J332YL	M 3.3KOHM, J, 1/10W
R1534	QRSA08J332YL	M 3.3KOHM, J, 1/10W
R1535	QRSA08J103YL	M 10KOHM, J, 1/10W
R1536	QRSA08J472YL	M 4.7KOHM, J, 1/10W
R1537	QRSA08J101YL	M 100 OHM, J, 1/10W
R1538	QRSA08J272YL	M 2.7KOHM, J, 1/10W
R1539	QRSA08J272YL	M 2.7KOHM, J, 1/10W
R1540	QRSA08J332YL	M 3.3KOHM, J, 1/10W
R1541	QRSA08J103YL	M 10KOHM, J, 1/10W
R1542	QRSA08J823YL	M 82KOHM, J, 1/10W
R1543	QRSA08J221YL	M 220 OHM, J, 1/10W
R1544	QRSA08J221YL	M 220 OHM, J, 1/10W
R1545	QRSA08J221YL	M 220 OHM, J, 1/10W
R1546	QRSA08J0R0YL	M 0 OHM, J, 1/10W
R1547	QRSA08J221YL	M 220 OHM, J, 1/10W
R1548	QRSA08J102YL	M 1KOHM, J, 1/10W
R1551	QRSA08J104YL	M 100KOHM, J, 1/10W
R1552	QRSA08J123YL	M 12KOHM, J, 1/10W
R1553	QRSA08J472YL	M 4.7KOHM, J, 1/10W
R1554	QRSA08J273YL	M 27KOHM, J, 1/10W
R1555	QRSA08J273YL	M 27KOHM, J, 1/10W
R1556	QRSA08J184YL	M 180KOHM, J, 1/10W
R1557	QRD162J104	C 100KOHM, J, 1/6W
R1558	QRSA08J223YL	M 22KOHM, J, 1/10W
R1559	QRSA08J223YL	M 22KOHM, J, 1/10W
R1560	QRSA08J124YL	M 120KOHM, J, 1/10W
R1561	QRSA08J562YL	M 5.6KOHM, J, 1/10W
R1562	QRSA08J183YL	M 18KOHM, J, 1/10W
R1563	QRSA08J563YL	M 56KOHM, J, 1/10W
R1564	QRSA08J473YL	M 47KOHM, J, 1/10W
R1565	QRSA08J124YL	M 120KOHM, J, 1/10W
R1566	QRSA08J564YL	M 560KOHM, J, 1/10W
R1567	QRSA08J154YL	M 150KOHM, J, 1/10W
R1572	QRSA08J563YL	M 56KOHM, J, 1/10W
R1573	QRSA08J392YL	M 3.9KOHM, J, 1/10W
R1574	QRSA08J392YL	M 3.9KOHM, J, 1/10W
R1576	QRSA08J472YL	M 4.7KOHM, J, 1/10W
R1577	QRSA08J0R0YL	M 0 OHM, J, 1/10W
R1578	QRSA08J273YL	M 27KOHM, J, 1/10W
R1579	QRSA08J472YL	M 4.7KOHM, J, 1/10W
R1580	QRSA08J472YL	M 4.7KOHM, J, 1/10W
R1581	QRSA08J472YL	M 4.7KOHM, J, 1/10W
R1582	QRSA08J273YL	M 27KOHM, J, 1/10W
R1583	QRSA08J560YL	M 56 OHM, J, 1/10W
R1601	QRSA08J102YL	M 1KOHM, J, 1/10W
R1602	QRSA08J221YL	M 220 OHM, J, 1/10W
R1603	QRSA08J123YL	M 12KOHM, J, 1/10W
R1604	QRSA08J100YL	M 10 OHM, J, 1/10W
R1605	QRSA08J272YL	M 2.7KOHM, J, 1/10W
R1606	QRSA08J391YL	M 390 OHM, J, 1/10W
R2005	QRD121J152SY	C 1.5KOHM, J, 1/2W
R2302	QRC121K394Z	C 390KOHM, K, 1/2W
R2303	QRC121K394Z	C 390KOHM, K, 1/2W
R2304	QRC121K394Z	C 390KOHM, K, 1/2W
R2305	QRD161J155Y	C 1.5KOHM, J, 1/6W
R2306	QRD161J562Y	C 5.6KOHM, J, 1/6W
R2307	QRD161J472Y	C 4.7KOHM, J, 1/6W

	Ref. No.	Part No.	Description
	R2308	QRC121K473Z	C 47KOHM, K, 1/2W
	R2309	QRC121K225Z	C 2.2MOHM, K, 1/2W
	R2310	QRC121K225Z	C 2.2MOHM, K, 1/2W
	R2311	QRC121K225Z	C 2.2MOHM, K, 1/2W
	R2312	QRD161J683Y	C 68KOHM, J, 1/6W
	R2313	QVPC611503HZ	CONTROL 50KOHMB
	R2314	QRD161J103Y	C 10KOHM, J, 1/6W
	R2316	QRD161J153Y	C 15KOHM, J, 1/6W
	R2317	QRD161J473Y	C 47KOHM, J, 1/6W
	R2318	QRD161J102Y	C 1KOHM, J, 1/6W
	R2319	QRD161J103Y	C 10KOHM, J, 1/6W
	R2320	QRD161J472Y	C 4.7KOHM, J, 1/6W
	R2321	QRD161J103Y	C 10KOHM, J, 1/6W
	R2401	QRD161J182Y	C 1.8KOHM, J, 1/6W
	R2402	QRD161J822Y	C 8.2KOHM, J, 1/6W
	R2403	QRD161J104Y	C 100KOHM, J, 1/6W
	R2404	QRD161J222Y	C 2.2KOHM, J, 1/6W
	R2405	QRV141F2611A	M 2.61KOHM, F, 1/4W
	R2406	QRD161J101Y	C 100 OHM, J, 1/6W
	R2407	QRD161J471Y	C 470 OHM, J, 1/6W
	R2408	QRV141F8871A	M 8.87KOHM, F, 1/4W
	R2409	QRD161J104Y	C 100KOHM, J, 1/6W
	R2410	QRD161J102Y	C 1KOHM, J, 1/6W
	R2411	QRD161J182Y	C 1.8KOHM, J, 1/6W
	R2412	QRD161J104Y	C 100KOHM, J, 1/6W
	R2413	QRD161J822Y	C 8.2KOHM, J, 1/6W
	R2414	QRD161J682Y	C 6.8KOHM, J, 1.6W
	R2415	QRD161J820Y	C 82 OHM, J, 1/6W
	R2416	QVPC611102HZ	CONTROL 1KOHMB
	R2417	QRD161J103Y	C 10KOHM, J, 1/6W
	R2418	QRD161J222Y	C 2.2KOHM, J, 1/6W
	R2419	QRX029J1R0	M 1 OHM, J, 2W
	R2420	QRG029J270	M 27 OHM, J, 2W
	R2422	QRG019J221S	M 220 OHM, J, 1W
	R2423	QRD161J273Y	C 27KOHM, J, 1/6W
⚠	R2424	QRD161J223Y	C 22KOHM, J, 1/6W
	R2425	QRD161J101Y	C 100 OHM, J, 1/6W
	R2427	QRD161J562Y	C 5.6KOHM, J, 1/6W
	R2428	QRD161J153Y	C 15KOHM, J, 1/6W
	R2429	QRD161J183Y	C 18KOHM, J, 1/6W
	R2430	QRD161J393Y	C 39KOHM, J, 1/6W
	R2431	QRD161J683Y	C 68KOHM, J, 1/6W
	R2433	QRD161J101Y	C 100 OHM, J, 1/6W
	R2434	QRD161J103Y	C 10KOHM, J, 1/6W
	R2435	QRD161J153Y	C 15KOHM, J, 1/6W
	R2436	QRD161J103Y	C 10KOHM, J, 1/6W
	R2437	QRD161J103Y	C 10KOHM, J, 1/6W
	R2438	QRD161J103Y	C 10KOHM, J, 1/6W
	R2439	QRD161J222Y	C 2.2KOHM, J, 1/6W
	R2501	QRD161J683Y	C 68KOHM, J, 1/6W
	R2502	QRD121J103SY	C 10KOHM, J, 1/2W
	R2503	QVPC611502HZ	CONTROL 5KOHMB
	R2505	QRD161J225Y	C 2.2MOHM, J, 1/6W
	R2506	QRD161J101Y	C 100 OHM, J, 1/6W
	R2509	QRD161J225Y	C 2.2MOHM, J, 1/6W
	R2510	QRD161J102Y	C 1KOHM, J, 1/6W
	R2511	QRD121J272SY	C 2.7KOHM, J, 1/2W
	R2512	QRF074K4R7	F 4.7 OHM, K, 7W
	R2513	QRF074K4R7	F 4.7 OHM, K, 7W
	R2514	QRD121J472SY	C 4.7KOHM, J, 1/2W
	R2515	QRG029J272	M 2.7KOHM, J, 2W
	R2516	QRD121J392SY	C 3.9KOHM, J, 1/2W
	R2517	QRD161J471Y	C 470 OHM, J, 1/6W
	R2518	QRD161J331Y	C 330 OHM, J, 1/6W
	R2519	QRD121J562SY	C 5.6KOHM, J, 1/2W
	R2520	QRG029J102	M 1KOHM, J, 2W
	R2521	QRD161J151Y	C 150 OHM, J, 1/6W
	R2522	QRD121J104SY	C 100KOHM, J, 1/2W
	R2524	QRX029J1R8	M 1.8 OHM, J, 2W

	Ref. No.	Part No.	Description
	R2526	QRD161J513Y	C 51KOHM, J, 1/6W
	R2527	QRD161J473Y	C 47KOHM, J, 1/6W
	R2528	QRD121J272SY	C 2.7KOHM, J, 1/2W
	R2529	QRD161J102Y	C 1KOHM, J, 1/6W
	R2530	QRX029J4R7	M 4.7 OHM, J, 2W
	R2531	QRX029J4R7	M 4.7 OHM, J, 2W
	R2532	QRG029J471	M 470 OHM, J, 2W
	R2542	QRD161J823Y	C 82KOHM, J, 1/6W
	R2548	QRG029J102	M 1KOHM, J, 2W
	R2549	QRG029J102	M 1KOHM, J, 2W
	R2550	QRG029J222	M 2.2KOHM, J, 2W
	R2551	QRD161J121Y	C 120 OHM, J, 1/6W
	R2552	QRD161J101Y	C 100 OHM, J, 1/6W
	R2553	QRD161J101Y	C 100 OHM, J, 1/6W
	R2554	QRD161J103Y	C 10KOHM, J, 1/6W
	R2555	QRD161J473Y	C 47KOHM, J, 1/6W
	R2558	QRD161J473Y	C 47KOHM, J, 1/6W
	R2559	QRD161J103Y	C 10KOHM, J, 1/6W
	R2562	QRD161J182Y	C 1.8KOHM, J, 1/6W
	R2563	QRD161J471Y	C 470 OHM, J, 1/6W
	R2564	QRD161J333Y	C 33KOHM, J, 1/6W
	R2565	QRD161J101Y	C 100 OHM, J, 1/6W
⚠	R2568	QRD161J223Y	C 22KOHM, J, 1/6W
	R2569	QRD161J823Y	C 82KOHM, J, 1/6W
	R2570	QRD121J102SY	C 1KOHM, J, 1/2W
	R2571	QRD121J102SY	C 1KOHM, J, 1/2W
	R2573	QRD161J184Y	C 180KOHM, J, 1/6W
	R2574	QRD161J184Y	C 180KOHM, J, 1/6W
	R2575	QRD161J184Y	C 180KOHM, J, 1/6W
	R2576	QRD161J822Y	C 8.2KOHM, J, 1/6W
	R2577	QRD161J222Y	C 2.2KOHM, J, 1/6W
	R2578	QRD161J103Y	C 10KOHM, J, 1/6W
	R2579	QRD161J471Y	C 470 OHM, J, 1/6W
	R2580	QRD161J332Y	C 3.3KOHM, J, 1/6W
	R2581	QRD161J123Y	C 12KOHM, J, 1/6W
	R2582	QVPC611303HZ	CONTROL 30KOHMB
	R2583	QRD161J103Y	C 10KOHM, J, 1/6W
	R2584	QRD161J473Y	C 47KOHM, J, 1/6W
	R2585	QRD161J103Y	C 10KOHM, J, 1/6W
	R2586	QRD161J104Y	C 100KOHM, J, 1/6W
	R2587	QRD161J222Y	C 2.2KOHM, J, 1/6W
	R2588	QRD161J103Y	C 10KOHM, J, 1/6W
	R2589	QRD161J103Y	C 10KOHM, J, 1/6W
	R2591	QRD161J473Y	C 47KOHM, J, 1/6W
	R2601	QRD121J103SY	C 10KOHM, J, 1/2W
	R2602	QRD161J102Y	C 1KOHM, J, 1/6W
	R2603	QRD161J682Y	C 6.8KOHM, J, 1.6W
	R2604	QRD161J183Y	C 18KOHM, J, 1/6W
	R2606	QRD161J682Y	C 6.8KOHM, J, 1.6W
	R2607	QRD161J103Y	C 10KOHM, J, 1/6W
	R2608	QRD161J473Y	C 47KOHM, J, 1/6W
	R2609	QRD161J225Y	C 2.2MOHM, J, 1/6W
	R2610	QRD161J102Y	C 1KOHM, J, 1/6W
	R2611	QRD121J563SY	C 56KOHM, J, 1/2W
	R2612	QVPC611502HZ	CONTROL 5KOHMB
	R2613	QRD161J103Y	C 10KOHM, J, 1/6W
	R2615	QRD161J332Y	C 3.3KOHM, J, 1/6W
	R2616	QRD161J183Y	C 18KOHM, J, 1/6W
	R2701	QRD161J104Y	C 100KOHM, J, 1/6W
⚠	R2705	QRD161J223Y	C 22KOHM, J, 1/6W
	R2706	QRD161J101Y	C 100 OHM, J, 1/6W
	R2707	QRD161J333Y	C 33KOHM, J, 1/6W
	R2708	QRD161J103Y	C 10KOHM, J, 1/6W
	R2709	QRD161J104Y	C 100KOHM, J, 1/6W
	R2710	QRD161J393Y	C 39KOHM, J, 1/6W
	R2712	QRD161J102Y	C 1KOHM, J, 1/6W
	R2713	QRD161J222Y	C 2.2KOHM, J, 1/6W
⚠	R2714	QRV141F1962A	M 19.6KOHM, F, 1/4W
⚠	R2715	QRV141F6801A	M 6.8KOHM, F, 1/4W

	Ref. No.	Part No.	Description
	R2801	QRG029J100	M 10 OHM, J, 2W
	R3301	QRD161J151Y	C 150 OHM, J, 1/6W
	R3302	QRD161J151Y	C 150 OHM, J, 1/6W
	R3303	QRD161J151Y	C 150 OHM, J, 1/6W
	R3304	QRD161J181Y	C 180 OHM, J, 1/6W
	R3305	QRD161J181Y	C 180 OHM, J, 1/6W
	R3306	QRD161J181Y	C 180 OHM, J, 1/6W
	R3310	QRG029J103	M 10KOHM, J, 2W
	R3311	QRG029J103	M 10KOHM, J, 2W
	R3312	QRG029J103	M 10KOHM, J, 2W
	R3313	QRG029J103	M 10KOHM, J, 2W
	R3314	QRG029J103	M 10KOHM, J, 2W
	R3315	QRG029J103	M 10KOHM, J, 2W
⚠	R3322	QRD149J102S	C 1KOHM, J, 1/4W
⚠	R3323	QRD149J102S	C 1KOHM, J, 1/4W
⚠	R3324	QRD149J102S	C 1KOHM, J, 1/4W
	R3325	QRC121K681Z	C 680 OHM, K, 1/2W
	R3326	QRC121K681Z	C 680 OHM, K, 1/2W
	R3327	QRC121K681Z	C 680 OHM, K, 1/2W
	R3331	QRD161J102Y	C 1KOHM, J, 1/6W
	R3341	QRD161J332Y	C 3.3KOHM, J, 1/6W
	R3342	QRD161J332Y	C 3.3KOHM, J, 1/6W
	R3343	QRD161J332Y	C 3.3KOHM, J, 1/6W
	R3501	QRC121K105Z	C 1MOHM, K, 1/2W
	R3502	QRC121K102Z	C 1KOHM, K, 1/2W
	R3503	QRC121K474Z	C 470KOHM, K, 1/2W
	R3506	QRD122J274S	C 270KOHM, J, 1/2W
	R3507	QRG029J822	M 8.2KOHM, J, 2W
	R3508	QRD161J183Y	C 18KOHM, J, 1/6W
	R3509	QRD161J472Y	C 4.7KOHM, J, 1/6W
	R3520	QRC121K225Z	C 2.2MOHM, K, 1/2W
	R4001	QVGA003CB14A	CONTROL 10KOHMB
	R4002	QVGA003CB14A	CONTROL 10KOHMB
	R4003	QVGA003CB14A	CONTROL 10KOHMB
	R4004	QVGA003CB14A	CONTROL 10KOHMB
	R4005	QVGA004CB14A	CONTROL 10KOHMB
	R4101	QRD161J181Y	C 180 OHM, J, 1/6W
	R4102	QRD161J333Y	C 33KOHM, J, 1/6W
	R4103	QRD161J333Y	C 33KOHM, J, 1/6W
	R4104	QRD161J333Y	C 33KOHM, J, 1/6W
	R4105	QRD161J333Y	C 33KOHM, J, 1/6W
	R4106	QRD161J333Y	C 33KOHM, J, 1/6W
	R5101	QRSA08J101YL	M 100 OHM, J, 1/10W
	R5102	QRSA08J101YL	M 100 OHM, J, 1/10W
	R5103	QRSA08J101YL	M 100 OHM, J, 1/10W
	R5104	QRSA08J101YL	M 100 OHM, J, 1/10W
	R5105	QRSA08J101YL	M 100 OHM, J, 1/10W
	R5106	QRSA08J101YL	M 100 OHM, J, 1/10W
	R5107	QRSA08J101YL	M 100 OHM, J, 1/10W
	R5108	QRSA08J101YL	M 100 OHM, J, 1/10W
	R5109	QRSA08J101YL	M 100 OHM, J, 1/10W
	R5110	QRSA08J103YL	M 10KOHM, J, 1/10W
	R5111	QRSA08J103YL	M 10KOHM, J, 1/10W
	R5112	QRSA08J103YL	M 10KOHM, J, 1/10W
	R5113	QRSA08J103YL	M 10KOHM, J, 1/10W
	R5114	QRSA08J103YL	M 10KOHM, J, 1/10W
	R5115	QRSA08J101YL	M 100 OHM, J, 1/10W
	R5116	QRSA08J101YL	M 100 OHM, J, 1/10W
	R5117	QRSA08J101YL	M 100 OHM, J, 1/10W
	R5118	QRSA08J101YL	M 100 OHM, J, 1/10W
	R5119	QRSA08J101YL	M 100 OHM, J, 1/10W
	R5120	QRSA08J122YL	M 1.2KOHM, J, 1/10W
	R5121	QRSA08J103YL	M 10KOHM, J, 1/10W
	R5122	QRSA08J272YL	M 2.7KOHM, J, 1/10W
	R5123	QRSA08J103YL	M 10KOHM, J, 1/10W
	R5124	QRSA08J103YL	M 10KOHM, J, 1/10W
	R5125	QRSA08J103YL	M 10KOHM, J, 1/10W
	R5126	QRSA08J103YL	M 10KOHM, J, 1/10W
	R5127	QRSA08J103YL	M 10KOHM, J, 1/10W
	R5128	QRSA08J472YL	M 4.7KOHM, J, 1/10W
	R5129	QRSA08J103YL	M 10KOHM, J, 1/10W
	R5130	QRSA08J103YL	M 10KOHM, J, 1/10W
	R5131	QRSA08J103YL	M 10KOHM, J, 1/10W
	R5132	QRSA08J103YL	M 10KOHM, J, 1/10W
	R5134	QRSA08J103YL	M 10KOHM, J, 1/10W
	R5135	QRSA08J103YL	M 10KOHM, J, 1/10W
	R5136	QRSA08J102YL	M 1KOHM, J, 1/10W
	R5137	QRSA08J103YL	M 10KOHM, J, 1/10W
	R5138	QRSA08J103YL	M 10KOHM, J, 1/10W
	R5139	QRSA08J221YL	M 220 OHM, J, 1/10W
	R5140	QRSA08J221YL	M 220 OHM, J, 1/10W
	R5143	QRSA08J103YL	M 10KOHM, J, 1/10W
	R5144	QRSA08J273YL	M 27KOHM, J, 1/10W
	R5145	QRSA08J273YL	M 27KOHM, J, 1/10W
	R5146	QRSA08J273YL	M 27KOHM, J, 1/10W
	R5148	QRSA08J273YL	M 27KOHM, J, 1/10W
	R5149	QRSA08J103YL	M 10KOHM, J, 1/10W
	R5150	QRSA08J222YL	M 2.2KOHM, J, 1/10W
	R5151	QRSA08J103YL	M 10KOHM, J, 1/10W
	R5153	QRSA08J103YL	M 10KOHM, J, 1/10W
	R5154	QRSA08J183YL	M 18KOHM, J, 1/10W
	R5155	QRSA08J562YL	M 5.6KOHM, J, 1/10W
	R5156	QRSA08J153YL	M 15KOHM, J, 1/10W
	R5157	QRSA08J103YL	M 10KOHM, J, 1/10W
	R5158	QRSA08J220YL	M 22 OHM, J, 1/10W
	R5159	QRSA08J220YL	M 22 OHM, J, 1/10W
	R5160	QRSA08J103YL	M 10KOHM, J, 1/10W
	R5161	QRSA08J103YL	M 10KOHM, J, 1/10W
	R5201	QRSA08J272YL	M 2.7KOHM, J, 1/10W
	R5202	QRSA08J391YL	M 390 OHM, J, 1/10W
	R5203	QRSA08J182YL	M 1.8KOHM, J, 1/10W
	R5204	QRSA08J272YL	M 2.7KOHM, J, 1/10W
	R5205	QRSA08J271YL	M 270 OHM, J, 1/10W
	R5206	QRSA08J182YL	M 1.8KOHM, J, 1/10W
	R5207	QRSA08J272YL	M 2.7KOHM, J, 1/10W
	R5208	QRSA08J471YL	M 470 OHM, J, 1/10W
	R5209	QRSA08J182YL	M 1.8KOHM, J, 1/10W
	R5210	QRSA08J273YL	M 27KOHM, J, 1/10W
	R5211	QRSA08J0R0YL	M 0 OHM, J, 1/10W
	R5212	QRSA08J273YL	M 27KOHM, J, 1/10W
	R5213	QRSA08J121YL	M 120 OHM, J, 1/10W
	R5214	QRSA08J273YL	M 27KOHM, J, 1/10W
	R5215	QRSA08J391YL	M 390 OHM, J, 1/10W
	R5216	QRSA08J273YL	M 27KOHM, J, 1/10W
	R5217	QRSA08J0R0YL	M 0 OHM, J, 1/10W
	R5301	QRSA08J683YL	M 68KOHM, J, 1/10W
	R5302	QRSA08J184YL	M 180KOHM, J, 1/10W
	R5303	QRSA08J562YL	M 5.6KOHM, J, 1/10W
	R5304	QRSA08J104YL	M 100KOHM, J, 1/10W
	R5305	QRSA08J684YL	M 680KOHM, J, 1/10W
	R5306	QRSA08J223YL	M 22KOHM, J, 1/10W
	R5307	QRSA08J103YL	M 10KOHM, J, 1/10W
	R5308	QRSA08J103YL	M 10KOHM, J, 1/10W
	R5309	QRSA08J223YL	M 22KOHM, J, 1/10W
	R5310	QRSA08J183YL	M 18KOHM, J, 1/10W
	R5311	QRSA08J103YL	M 10KOHM, J, 1/10W
	R5312	QRSA08J472YL	M 4.7KOHM, J, 1/10W
	R5401	QRSA08J222YL	M 2.2KOHM, J, 1/10W
	R5402	QRSA08J272YL	M 2.7KOHM, J, 1/10W
	R5403	QRSA08J222YL	M 2.2KOHM, J, 1/10W
	R5404	QRSA08J472YL	M 4.7KOHM, J, 1/10W
	R5405	QRSA08J472YL	M 4.7KOHM, J, 1/10W
	R5406	QRSA08J223YL	M 22KOHM, J, 1/10W
	R5407	QRSA08J273YL	M 27KOHM, J, 1/10W
	R5408	QRSA08J102YL	M 1KOHM, J, 1/10W
	R5409	QRSA08J563YL	M 56KOHM, J, 1/10W
	R5410	QRSA08J103YL	M 10KOHM, J, 1/10W
	R5501	QRSA08J101YL	M 100 OHM, J, 1/10W

	Ref. No.	Part No.	Description
	R5502	QRSA08J101YL	M 100 OHM, J, 1/10W
	R5503	QRSA08J101YL	M 100 OHM, J, 1/10W
	R5504	QRSA08J101YL	M 100 OHM, J, 1/10W
	R5701	QRSA08J221YL	M 220 OHM, J, 1/10W
	R5702	QRSA08J221YL	M 220 OHM, J, 1/10W
	R5703	QRSA08J221YL	M 220 OHM, J, 1/10W
	R5704	QRSA08J221YL	M 220 OHM, J, 1/10W
	R5705	QRSA08J221YL	M 220 OHM, J, 1/10W
	R5706	QRSA08J221YL	M 220 OHM, J, 1/10W
	R5707	QRSA08J221YL	M 220 OHM, J, 1/10W
	R5708	QRSA08J221YL	M 220 OHM, J, 1/10W
	R5709	QRSA08J221YL	M 220 OHM, J, 1/10W
	R5710	QRSA08J221YL	M 220 OHM, J, 1/10W
	R5711	QRSA08J221YL	M 220 OHM, J, 1/10W
	R5712	QRSA08J221YL	M 220 OHM, J, 1/10W
	R5713	QRSA08J221YL	M 220 OHM, J, 1/10W
	R5714	QRSA08J221YL	M 220 OHM, J, 1/10W
	R5715	QRSA08J102YL	M 1KOHM, J, 1/10W
	R5716	QRSA08J221YL	M 220 OHM, J, 1/10W
	R5717	QRSA08J221YL	M 220 OHM, J, 1/10W
	R5718	QRSA08J221YL	M 220 OHM, J, 1/10W
	R5719	QRSA08J221YL	M 220 OHM, J, 1/10W
	R5720	QRSA08J221YL	M 220 OHM, J, 1/10W
	R5721	QRSA08J221YL	M 220 OHM, J, 1/10W
	R5722	QRSA08J221YL	M 220 OHM, J, 1/10W
	R5723	QRSA08J221YL	M 220 OHM, J, 1/10W
	R5724	QRSA08J221YL	M 220 OHM, J, 1/10W
	R5725	QRSA08J221YL	M 220 OHM, J, 1/10W
	R5726	QRSA08J102YL	M 1KOHM, J, 1/10W
	R5727	QRSA08J221YL	M 220 OHM, J, 1/10W
	R5728	QRSA08J221YL	M 220 OHM, J, 1/10W
	R5729	QRSA08J221YL	M 220 OHM, J, 1/10W
	R5730	QRSA08J103YL	M 10KOHM, J, 1/10W
	R5731	QRSA08J221YL	M 220 OHM, J, 1/10W
	R5732	QRSA08J472YL	M 4.7KOHM, J, 1/10W
	R5733	QRSA08J472YL	M 4.7KOHM, J, 1/10W
	R6201	QRV141F75R0A	M 75 OHM, F, 1/4W
	R6202	QRD161J121Y	C 120 OHM, J, 1/6W
	R6203	QRD161J154Y	C 150KOHM, J, 1/6W
	R6204	QRD161J104Y	C 100KOHM, J, 1/6W
	R6205	QRD161J332Y	C 3.3KOHM, J, 1/6W
	R6211	QRV141F75R0A	M 75 OHM, F, 1/4W
	R6212	QRD161J121Y	C 120 OHM, J, 1/6W
	R6213	QRD161J154Y	C 150KOHM, J, 1/6W
	R6214	QRD161J104Y	C 100KOHM, J, 1/6W
	R6215	QRD161J332Y	C 3.3KOHM, J, 1/6W
	R6220	QRD161J472Y	C 4.7KOHM, J, 1/6W
	R6221	QRD161J820Y	C 82 OHM, J, 1/6W
	R6222	QRD161J153Y	C 15KOHM, J, 1/6W
	R6231	QRV141F75R0A	M 75 OHM, F, 1/4W
	R6232	QRD161J221Y	C 220 OHM, J, 1/6W
	R6233	QRD161J683Y	C 68KOHM, J, 1/6W
	R6234	QRD161J184Y	C 180KOHM, J, 1/6W
	R6235	QRD161J562Y	C 5.6KOHM, J, 1/6W
	R6236	QRD161J392Y	C 3.9KOHM, J, 1/6W
	R6239	QRD161J332Y	C 3.3KOHM, J, 1/6W
	R6240	QRD161J680Y	C 68 OHM, J, 1/6W
	R6251	QRD161J123Y	C 12KOHM, J, 1/6W
	R6252	QRD161J123Y	C 12KOHM, J, 1/6W
⚠	R6253	QRD161J223Y	C 22KOHM, J, 1/6W
⚠	R6254	QRD161J223Y	C 22KOHM, J, 1/6W
	R6255	QRD161J333Y	C 33KOHM, J, 1/6W
	R6301	QRV141F75R0A	M 75 OHM, F, 1/4W
	R6302	QRD161J121Y	C 120 OHM, J, 1/6W
	R6303	QRD161J393Y	C 39KOHM, J, 1/6W
	R6304	QRD161J124Y	C 120KOHM, J, 1/6W
	R6305	QRD161J562Y	C 5.6KOHM, J, 1/6W
	R6306	QRD161J101Y	C 100 OHM, J, 1/6W
	R6316	QRD161J122Y	C 1.2KOHM, J, 1/6W
	R6317	QRD161J472Y	C 4.7KOHM, J, 1/6W
⚠	R6318	QRD161J223Y	C 22KOHM, J, 1/6W
	R6601	QRD143J153SX	C 15KOHM, J, 1/4W
	R6602	QRD161J563Y	C 56KOHM, J, 1/6W
	R6603	QRD161J683Y	C 68KOHM, J, 1/6W
	R6604	QRD161J102Y	C 1KOHM, J, 1/6W
	R6611	QRD143J153SX	C 15KOHM, J, 1/4W
	R6612	QRD161J563Y	C 56KOHM, J, 1/6W
	R6613	QRD161J683Y	C 68KOHM, J, 1/6W
	R6614	QRD161J102Y	C 1KOHM, J, 1/6W
	R6621	QRD143J153SX	C 15KOHM, J, 1/4W
	R6622	QRD161J563Y	C 56KOHM, J, 1/6W
	R6623	QRD161J683Y	C 68KOHM, J, 1/6W
	R6624	QRD161J102Y	C 1KOHM, J, 1/6W
	R6631	QRD161J102Y	C 1KOHM, J, 1/6W
	R6632	QRD161J472Y	C 4.7KOHM, J, 1/6W
	R6641	QRD161J123Y	C 12KOHM, J, 1/6W
⚠	R6642	QRD161J223Y	C 22KOHM, J, 1/6W
	R6644	QRD161J103Y	C 10KOHM, J, 1/6W
	R6645	QRD161J123Y	C 12KOHM, J, 1/6W
⚠	R6646	QRD161J223Y	C 22KOHM, J, 1/6W
	R6648	QRD161J103Y	C 10KOHM, J, 1/6W
	R6701	QRV141F75R0A	M 75 OHM, F, 1/4W
	R6702	QRD161J331Y	C 330 OHM, J, 1/6W
⚠	R6703	QRD161J223Y	C 22KOHM, J, 1/6W
	R6704	QRD161J123Y	C 12KOHM, J, 1/6W
	R6705	QRD161J272Y	C 2.7KOHM, J, 1/6W
	R6706	QRD161J221Y	C 220 OHM, J, 1/6W
	R6707	QRD161J273Y	C 27KOHM, J, 1/6W
	R6708	QRD161J222Y	C 2.2KOHM, J, 1/6W
	R6709	QRD161J121Y	C 120 OHM, J, 1/6W
	R6710	QRD161J183Y	C 18KOHM, J, 1/6W
	R6711	QRD161J333Y	C 33KOHM, J, 1/6W
	R6712	QRD161J153Y	C 15KOHM, J, 1/6W
	R6713	QRD161J272Y	C 2.7KOHM, J, 1/6W
	R6714	QRD161J680Y	C 68 OHM, J, 1/6W
	R6721	QRD161J473Y	C 47KOHM, J, 1/6W
	R6722	QRD161J123Y	C 12KOHM, J, 1/6W
	R6731	QRV141F75R0A	M 75 OHM, F, 1/4W
	R6732	QRD161J331Y	C 330 OHM, J, 1/6W
⚠	R6733	QRD161J223Y	C 22KOHM, J, 1/6W
	R6734	QRD161J123Y	C 12KOHM, J, 1/6W
	R6735	QRD161J272Y	C 2.7KOHM, J, 1/6W
	R6736	QRD161J221Y	C 220 OHM, J, 1/6W
	R6737	QRD161J273Y	C 27KOHM, J, 1/6W
	R6738	QRD161J222Y	C 2.2KOHM, J, 1/6W
	R6739	QRD161J121Y	C 120 OHM, J, 1/6W
	R6740	QRD161J183Y	C 18KOHM, J, 1/6W
	R6741	QRD161J102Y	C 1KOHM, J, 1/6W
	R6742	QRD161J561Y	C 560 OHM, J, 1/6W
	R6744	QRD161J681Y	C 680 OHM, J, 1/6W
	R6745	QRD161J152Y	C 1.5KOHM, J, 1/6W
	R6746	QRD161J222Y	C 2.2KOHM, J, 1/6W
	R6747	QRD161J821Y	C 820 OHM, J, 1/6W
	R6748	QRD161J152Y	C 1.5KOHM, J, 1/6W
	R6749	QRD161J182Y	C 1.8KOHM, J, 1/6W
	R6750	QRD161J222Y	C 2.2KOHM, J, 1/6W
	R6751	QRD161J472Y	C 4.7KOHM, J, 1/6W
	R6752	QRD161J153Y	C 15KOHM, J, 1/6W
	R6753	QRD161J683Y	C 68KOHM, J, 1/6W
	R6761	QRV141F75R0A	M 75 OHM, F, 1/4W
	R6762	QRD161J331Y	C 330 OHM, J, 1/6W
⚠	R6763	QRD161J223Y	C 22KOHM, J, 1/6W
	R6764	QRD161J123Y	C 12KOHM, J, 1/6W
	R6765	QRD161J272Y	C 2.7KOHM, J, 1/6W
	R6766	QRD161J221Y	C 220 OHM, J, 1/6W
	R6767	QRD161J273Y	C 27KOHM, J, 1/6W
	R6768	QRD161J222Y	C 2.2KOHM, J, 1/6W
	R6769	QRD161J121Y	C 120 OHM, J, 1/6W

	Ref. No.	Part No.	Description
	R6770	QRD161J183Y	C 18KOHM, J, 1/6W
	R6771	QRD161J821Y	C 820 OHM, J, 1/6W
	R6772	QRD161J561Y	C 560 OHM, J, 1/6W
	R6774	QRD161J681Y	C 680 OHM, J, 1/6W
	R6775	QRD161J152Y	C 1.5KOHM, J, 1/6W
	R6776	QRD161J222Y	C 2.2KOHM, J, 1/6W
	R6777	QRD161J821Y	C 820 OHM, J, 1/6W
	R6778	QRD161J152Y	C 1.5KOHM, J, 1/6W
	R6779	QRD161J182Y	C 1.8KOHM, J, 1/6W
	R6780	QRD161J222Y	C 2.2KOHM, J, 1/6W
	R6781	QRD161J123Y	C 12KOHM, J, 1/6W
	R6782	QRD161J153Y	C 15KOHM, J, 1/6W
	R6783	QRD161J683Y	C 68KOHM, J, 1/6W
	R6789	QRD161J221Y	C 220 OHM, J, 1/6W
	R6790	QRD161J221Y	C 220 OHM, J, 1/6W
	R6791	QRD161J221Y	C 220 OHM, J, 1/6W
	R6792	QRD161J331Y	C 330 OHM, J, 1/6W
	R6793	QRD161J333Y	C 33KOHM, J, 1/6W
	R6794	QRD161J333Y	C 33KOHM, J, 1/6W
	R6795	QRD161J102Y	C 1KOHM, J, 1/6W
	R6801	QRD161J123Y	C 12KOHM, J, 1/6W
	R6802	QRD161J123Y	C 12KOHM, J, 1/6W
	R6803	QRD161J123Y	C 12KOHM, J, 1/6W
	R6804	QRD161J123Y	C 12KOHM, J, 1/6W
	R6805	QRD161J101Y	C 100 OHM, J, 1/6W
	R6806	QRD161J101Y	C 100 OHM, J, 1/6W
	R6807	QRD161J101Y	C 100 OHM, J, 1/6W
	R6808	QRD161J101Y	C 100 OHM, J, 1/6W
	R6809	QRD161J102Y	C 1KOHM, J, 1/6W
⚠	R6810	QRD161J223Y	C 22KOHM, J, 1/6W
⚠	R9002	QRD122J474S	C 470KOHM, J, 1/2W
	R9005	QRD123J104SX	C 100KOHM, J, 1/2W
	R9006	QRD123J104SX	C 100KOHM, J, 1/2W
	R9008	QRD161J103Y	C 10KOHM, J, 1/6W
	R9009	QRD161J103Y	C 10KOHM, J, 1/6W
	R9010	QRD161J561Y	C 560 OHM, J, 1/6W
	R9011	QRD161J103Y	C 10KOHM, J, 1/6W
	R9012	QRD161J470Y	C 47 OHM, J, 1/6W
	R9013	QRD161J103Y	C 10KOHM, J, 1/6W
	R9014	QRM059KR22	M 0.22 OHM, K, 5W
	R9015	QRG039J563A	M 56KOHM, J, 3W
	R9016	QRD123J182SX	C 1.8KOHM, J, 1/2W
	R9020	QRD161J222Y	C 2.2KOHM, J, 1/6W
	R9021	QRD161J104Y	C 100KOHM, J, 1/6W
	R9022	QRD161J474Y	C 470KOHM, J, 1/6W
	R9023	QRD161J393Y	C 39KOHM, J, 1/6W
	R9026	QRD161J104Y	C 100KOHM, J, 1/6W
	R9027	QRD161J182Y	C 1.8KOHM, J, 1/6W
	R9028	QRD161J271Y	C 270 OHM, J, 1/6W
	R9029	QRD161J103Y	C 10KOHM, J, 1/6W
	R9030	QRD123J100SX	C 10 OHM, J, 1/2W
	R9031	QRD161J392Y	C 3.9KOHM, J, 1/6W
	R9032	QRD161J392Y	C 3.9KOHM, J, 1/6W
	R9034	QRV141F2202A	M 22KOHM, F, 1/4W
	R9035	QRV141F1962A	M 19.6KOHM, F, 1/4W
	R9037	QRV141F3901A	M 3.9KOHM, F, 1/4W
	R9038	QVPC611102HZ	CONTROL 1KOHMB
	R9039	QRD123J154SX	C 150KOHM, J, 1/2W
	R9040	QRD161J103Y	C 10KOHM, J, 1/6W
	R9041	QRD123J154SX	C 150KOHM, J, 1/2W
	R9042	QRD123J183SX	C 18KOHM, J, 1/2W
	R9043	QRD123J184SX	C 180KOHM, J, 1/2W
	R9044	QRV141F3901A	M 3.9KOHM, F, 1/4W
	R9045	QRV141F2701A	M 2.7KOHM, F, 1/4W
	R9046	QRD161J563Y	C 56KOHM, J, 1/6W
	R9047	QRD161J103Y	C 10KOHM, J, 1/6W
	R9048	QRV141F1501A	M 1.5KHOM, F, 1/4W
⚠	R9050	QRD161J223Y	C 22KOHM, J, 1/6W
	R9051	QRD161J683Y	C 68KOHM, J, 1/6W

	Ref. No.	Part No.	Description
	R9053	QRX029JR56A	M 0.56 OHM, J, 2W
	R9054	QRD123J270SX	C 27 OHM, J, 1/2W
	R9060	QRF154K4R7	F 4.7 OHM, K, 1/5W
	R9061	QRG039J123	M 12KOHM, J, 3W
	R9062	QRG039J123	M 12KOHM, J, 3W
	R9063	QRG039J123	M 12KOHM, J, 3W
	R9064	QRG039J123	M 12KOHM, J, 3W
	R9065	QRG039J223	M 22KOHM, J, 3W

CAPACITORS

	Ref. No.	Part No.	Description
	CM001	QETC1HM474Z	E 0.47UF, M, 50V
	CM002	NCB21HK103AY	C 0.01UF, K, 50V
	CM003	NCB21EK104AY	C 0.1UF, K, 25V
	CM004	NCB21HK103AY	C 0.01UF, K, 50V
	CM005	NCB21HK332AY	C 3300PF, K, 50V
	CM101	QETC1HM474Z	E 0.47UF, M, 50V
	CM102	NCB21HK102AY	C 1000PF, K, 50V
	CM103	NCB21HK102AY	C 1000PF, K, 50V
	CM105	NCB21HK222AY	C 2200PF, K, 50V
	CM106	QFV71HJ334MZ	P 0.33UF, J, 50V
	CM107	NCB21HK103AY	C 0.01UF, K, 50V
	CM108	NCB21HK102AY	C 1000PF, K, 50V
	CM109	NCB21HK102AY	C 1000PF, K, 50V
	CM110	NCB21HK103AY	C 0.01UF, K, 50V
	CM111	NCB21HK103AY	C 0.01UF, K, 50V
	CM112	NCB21HK222AY	C 2200PF, K, 50V
	CM113	NCB21HK223AY	C 0.022UF, K, 50V
	C1101	QETC1CM476Z	E 47UF, M, 16V
	C1102	NCB21HK103AY	C 0.01UF, K, 50V
	C1103	NCB21HK103AY	C 0.01UF, K, 50V
	C1104	NCB21HK103AY	C 0.01UF, K, 50V
	C1105	NCB21HK103AY	C 0.01UF, K, 50V
	C1106	NCB21HK103AY	C 0.01UF, K, 50V
	C1107	NCT03CH121AY	C 120PF, J, 50V
	C1108	NCT03CH470AY	C 47PF, J, 50V
	C1109	NCB21HK103AY	C 0.01UF, K, 50V
	C1110	NCB21HK103AY	C 0.01UF, K, 50V
	C1111	NCT03CH560AY	C 56PF, J, 50V
	C1112	NCB21HK103AY	C 0.01UF, K, 50V
	C1113	NCB21HK103AY	C 0.01UF, K, 50V
	C1114	QEN61CM476Z	E 47UF, M, 16V
	C1115	NCT03CH120AY	C 12PF, J, 50V
	C1116	NCT03CH560AY	C 56PF, J, 50V
	C1117	QAT3110300A	T 33PF, 100V
	C1118	NCB21HK103AY	C 0.01UF, K, 50V
	C1119	QETC1CM476Z	E 47UF, M, 16V
	C1120	QETC1CM476Z	E 47UF, M, 16V
	C1122	QAT3110300A	T 33PF, 100V
	C1123	NCT03CH101AY	C 100PF, J, 50V
	C1124	NCB21HK822AY	C 8200PF, K, 50V
	C1125	NCT03CH8R0AY	C 8PF, J, 50V
	C1201	NCB21HK103AY	C 0.01UF, K, 50V
	C1202	NCB21HK103AY	C 0.01UF, K, 50V
	C1203	NCT03CH680AY	C 68PF, J, 50V
	C1204	NCB21HK103AY	C 0.01UF, K, 50V
	C1205	NCT03CH820AY	C 82PF, J, 50V
	C1206	QAT3110450A	T 45PF 100V
	C1207	QAT3110450A	T 45PF 100V
	C1208	NCT03CH121AY	C 120PF, J, 50V
	C1209	QAT3110450A	T 45PF 100V
	C1210	NCB21HK103AY	C 0.01UF, K, 50V
	C1211	NCT03CH221AY	C 220PF, J, 50V
	C1212	NCB21HK273AY	C 0.027UF, K, 50V
	C1213	NCB21HK103AY	C 0.01UF, K, 50V
	C1214	QETC1HM105Z	E 1UF, M, 50V
	C1215	QETC1HM474Z	E 0.47UF, M, 50V

Ref. No.	Part No.	Description
C1216	QETC1CM107Z	E 100UF, M, 16V
C1217	NCB21HK103AY	C 0.01UF, K, 50V
C1218	QEN61CM106Z	E 10UF, M, 16V
C1219	QFLC1HJ153MZ	M 0.015UF, J, 50V
C1220	NCB21HK103AY	C 0.01UF, K, 50V
C1221	NCT03CH270AY	C 27PF, J, 50V
C1222	QAT3110300A	T 33PF, 100V
C1223	NCT03CH270AY	C 27PF, J, 50V
C1224	QAT3110300A	T 33PF, 100V
C1225	NCT03CH470AY	C 47PF, J, 50V
C1226	NCT03CH390AY	C 39PF, J, 50V
C1227	NCT03CH6R0AY	C 6PF, J, 50V
C1228	NCT03CH181AY	C 180PF, J, 50V
C1229	NCT03CH390AY	C 39PF, J, 50V
C1230	NCT03CH6R0AY	C 6PF, J, 50V
C1231	NCT03CH181AY	C 180PF, J, 50V
C1233	QETC1HM335Z	E 3.3UF, M, 50V
C1234	NCB21HK473AY	C 0.047UF, K, 50V
C1235	NCB21HK103AY	C 0.01UF, K, 50V
C1236	QETC1CM476Z	E 47UF, M, 16V
C1237	NCB21HK103AY	C 0.01UF, K, 50V
C1238	NCB21HK223AY	C 0.022UF, K, 50V
C1239	NCB21HK103AY	C 0.01UF, K, 50V
C1240	NCB21HK393AY	C 0.039UF, K, 50V
C1241	QETC1HM106Z	E 10UF, M, 50V
C1242	NCT03CH680AY	C 68PF, J, 50V
C1301	QETC1CM476Z	E 47UF, M, 16V
C1302	QFV71HJ104MZ	P 0.1UF, J, 50V
C1303	QETC1HM105Z	E 1UF, M, 50V
C1304	QETC1CM476Z	E 47UF, M, 16V
C1305	QETC1CM476Z	E 47UF, M, 16V
C1306	QFV71HJ104MZ	P 0.1UF, J, 50V
C1307	QETC1HM105Z	E 1UF, M, 50V
C1308	QETC1CM476Z	E 47UF, M, 16V
C1309	NCT03CH8R0AY	C 8PF, J, 50V
C1331	QETC1CM476Z	E 47UF, M, 16V
C1332	QFV71HJ104MZ	P 0.1UF, J, 50V
C1333	QETC1HM105Z	E 1UF, M, 50V
C1334	QETC1CM476Z	E 47UF, M, 16V
C1335	QETC1CM476Z	E 47UF, M, 16V
C1336	QFV71HJ104MZ	P 0.1UF, J, 50V
C1337	QETC1HM105Z	E 1UF, M, 50V
C1338	QETC1CM476Z	E 47UF, M, 16V
C1361	QETC1CM476Z	E 47UF, M, 16V
C1362	QFV71HJ104MZ	P 0.1UF, J, 50V
C1363	QETC1HM105Z	E 1UF, M, 50V
C1364	QETC1CM476Z	E 47UF, M, 16V
C1365	QETC1CM476Z	E 47UF, M, 16V
C1366	QFV71HJ104MZ	P 0.1UF, J, 50V
C1367	QETC1HM105Z	E 1UF, M, 50V
C1368	QETC1CM476Z	E 47UF, M, 16V
C1381	QETC1CM476Z	E 47UF, M, 16V
C1382	NCB21HK473AY	C 0.047UF, K, 50V
C1383	NCB21HK103AY	C 0.01UF, K, 50V
C1401	QETC1CM476Z	E 47UF, M, 16V
C1402	NCB21HK103AY	C 0.01UF, K, 50V
C1403	QEN61HM105Z	E 1UF, M, 50V
C1404	QETC1HM105Z	E 1UF, M, 50V
C1405	QETC1HM105Z	E 1UF, M, 50V
C1406	QFV71HJ104MZ	P 0.1UF, J, 50V
C1407	QFV71HJ104MZ	P 0.1UF, J, 50V
C1408	QETC1HM105Z	E 1UF, M, 50V
C1409	QETC1HM105Z	E 1UF, M, 50V
C1410	QFV71HJ104MZ	P 0.1UF, J, 50V
C1451	QETC1CM476Z	E 47UF, M, 16V
C1452	NCB21HK103AY	C 0.01UF, K, 50V
C1453	NCB21HK473AY	C 0.047UF, K, 50V
C1454	NCB21HK473AY	C 0.047UF, K, 50V
C1455	QETC1HM105Z	E 1UF, M, 50V
C1456	QEN61HM105Z	E 1UF, M, 50V

Ref. No.	Part No.	Description
C1457	QEN61HM105Z	E 1UF, M, 50V
C1458	QEN61HM105Z	E 1UF, M, 50V
C1459	QETC1HM105Z	E 1UF, M, 50V
C1460	QETC1HM105Z	E 1UF, M, 50V
C1461	QFV71HJ334MZ	P 0.33UF, J, 50V
C1462	NCB21HK102AY	C 1000PF, K, 50V
C1463	QFV71HJ224MZ	P 0.22UF, J, 50V
C1464	QFV71HJ224MZ	P 0.22UF, J, 50V
C1465	QFV71HJ224MZ	P 0.22UF, J, 50V
C1466	QETC1CM477Z	E 470UF, M, 16V
C1467	NCB21HK103AY	C 0.01UF, K, 50V
C1468	QETC1CM107Z	E 100UF, M, 16V
C1469	NCB21HK103AY	C 0.01UF, K, 50V
C1471	QETC1HM106Z	E 10UF, M, 50V
C1501	QETC1CM476Z	E 47UF, M, 16V
C1502	NCB21HK103AY	C 0.01UF, K, 50V
C1503	QEN61CM476Z	E 47UF, M, 16V
C1504	QEN61HM105Z	E 1UF, M, 50V
C1505	NCB21HK222AY	C 2200PF, K, 50V
C1506	QETC1HM335Z	E 3.3UF, M, 50V
C1507	QETC1HM335Z	E 3.3UF, M, 50V
C1508	NCB21HK103AY	C 0.01UF, K, 50V
C1509	NCB21HK103AY	C 0.01UF, K, 50V
C1510	QETC1HM106Z	E 10UF, M, 50V
C1511	NCB21HK222AY	C 2200PF, K, 50V
C1512	NCB21HK102AY	C 1000PF, K, 50V
C1513	NCT03CH101AY	C 100PF, J, 50V
C1516	NCT03CH181AY	C 180PF, J, 50V
C1517	NCT03CH820AY	C 82PF, J, 50V
C1551	QETC1AM107Z	E 100UF, M, 10V
C1552	NCB21HK473AY	C 0.047UF, K, 50V
C1553	NCB21HK473AY	C 0.047UF, K, 50V
C1554	NCB21HK473AY	C 0.047UF, K, 50V
C1555	NCT03CH391AY	C 390PF, J, 50V
C1556	NCT03CH331AY	C 330PF, J, 50V
C1557	NCB21HK222AY	C 2200PF, K, 50V
C1558	NCB21HK222AY	C 2200PF, K, 50V
C1559	NCT03CH180AY	C 18PF, H, 1.6KV
C1560	QAT3110450A	T 45PF, 100V
C1561	NCT03CH680AY	C 68PF, J, 50V
C1562	NCT03CH271AY	C 270PF, H, 1.6KV
C1563	NCT03CH680AY	C 68PF, J, 50V
C1564	NCT03CH121AY	C 120PF, J, 50V
C1565	NCT03CH391AY	C 390PF, J, 50V
C1567	QFP31HJ153SZ	P 0.015UF, J, 50V
C1568	NCB21HK222AY	C 2200PF, K, 50V
C1571	NCB21HK472AY	C 4700PF, K, 50V
C1572	QETC1HM106Z	E 10UF, M, 50V
C1601	QEHC1CM107MZ	E 100UF, M, 16V
C1602	NCB21HK103AY	C 0.01UF, K, 50V
C1603	QEHC1HM105MZ	E 1UF, M, 50V
C1604	QETC1HM106Z	E 10UF, M, 50V
C1605	QFV71HJ104MZ	P 0.1UF, J, 50V
C1607	QEHC1CM227MZ	E 220UF, M, 16V
C1608	QETB1EM228	E 2200UF, M, 25V
C1609	QETC1HM106Z	E 10UF, M, 50V
C1610	QFV71HJ104MZ	P 0.1UF, J, 50V
C1611	NCB21HK333AY	C 0.033UF, K, 50V
C1612	QEHC1HM475MZ	E 4.7UF, M, 50V
C1702	QFLC1HK473MZ	M 0.047UF, K, 50V
C2301	QFLC1HJ102MZ	M 1000PF, J, 50V
C2302	QEHC1HM106MZ	E 10UF, M, 50V
C2303	QFZ01174701S	P 4700PF, 2KV
C2304	QEHC1HM476MZ	E 47UF, M, 50V
C2305	QEN61CM106Z	E 10UF, M, 16V
C2402	QFLC1HJ823MZ	M 0.082UF, J, 50V
C2403	QETC1HM475Z	E 4.7UF, M, 50V
C2406	QEHC1CM107MZ	E 100UF, M, 16V
C2408	QEHC1HM227MZ	E 220UF, M, 50V

	Ref. No.	Part No.	Description					Ref. No.	Part No.	Description				
	C2409	QFV71HJ104MZ	P	0.1UF,	J,	50V		C5102	NCB21HK103AY	C	0.01UF,	K,	50V
	C2410	QFLB2AK154M	M	0.15UF,	K,	100V		C5103	NCF21HZ104AY	C	0.1UF,	Z,	50V
	C2411	QCS31HJ821AZ	C	820PF,	J,	50V		C5104	NCF21HZ104AY	C	0.1UF,	Z,	50V
	C2412	QFLC2AJ102MZ	M	1000PF,	J,	100V		C5105	NCB21HK103AY	C	0.01UF,	K,	50V
	C2413	QFLC1HJ153MZ	M	0.015UF,	J,	50V		C5106	NCB21HK103AY	C	0.01UF,	K,	50V
	C2414	QCS32HJ330AZ	C	33PF,	J,	500V		C5107	NCB21HK103AY	C	0.01UF,	K,	50V
	C2415	QEHC1VM107MZ	E	100UF,	M,	35V		C5108	NCB21HK103AY	C	0.01UF,	K,	50V
	C2416	QEHC1EM108MZ	E	1000UF,	M,	25V		C5109	NCB21HK103AY	C	0.01UF,	K,	50V
	C2417	QEHC1EM108MZ	E	1000UF,	M,	25V		C5110	NCF21HZ104AY	C	0.1UF,	Z,	50V
	C2418	QEHC1EM477MZ	E	470UF,	M,	25V		C5111	NCF21HZ104AY	C	0.1UF,	Z,	50V
	C2419	QEHC1EM227MZ	E	220UF,	M,	25V		C5112	NCF21HZ104AY	C	0.1UF,	Z,	50V
	C2420	QEHC1CM337MZ	E	330UF,	M,	16V		C5113	QEKC1CM476MZ	E	47UF,	M,	16V
	C2421	QEHC1EM477MZ	E	470UF,	M,	25V		C5114	NCT03CH330AY	C	33PF,	J,	50V
	C2422	QEHB1VM108M	E	1000UF,	M,	35V		C5116	NCF21HZ104AY	C	0.1UF,	Z,	50V
	C2423	QEHC1CM107MZ	E	100UF,	M,	16V		C5117	QEKC0JM107MZ	E	100UF,	M,	6.3V
	C2501	QETC1CM107Z	E	100UF,	M,	16V		C5118	NCF21HZ104AY	C	0.1UF,	Z,	50V
	C2502	QFP31HJ332SZ	P	3300PF,	J,	50V		C5119	QEKC0JM107MZ	E	100UF,	M,	6.3V
	C2503	QFLC1HJ222MZ	M	2200PF,	J,	50V		C5120	NCF21HZ104AY	C	0.1UF,	Z,	50V
	C2504	QFV71HJ824MZ	F	0.82UF,	J,	50V		C5121	QEKC0JM107MZ	E	100UF,	M,	6.3V
	C2505	QFLC1HJ822MZ	M	8200PF,	J,	50V		C5122	NCF21HZ104AY	C	0.1UF,	Z,	50V
	C2511	QFLC1HJ563MZ	M	0.056UF,	J,	50V		C5123	QEKC1CM476MZ	E	47UF,	M,	16V
	C2512	QFLC1HJ153MZ	M	0.015UF,	J,	50V		C5124	NCF21HZ104AY	C	0.1UF,	Z,	50V
	C2513	QCS32HJ471AZ	C	470PF,	J,	500V		C5126	NCF21HZ104AY	C	0.1UF,	Z,	50V
	C2514	QFLC2AK104MZ	M	0.1UF,	K,	100V		C5127	NCT03CH7R0AY	C	7PF,	J,	50V
⚠	C2519	QFZ0119105S	P	1UF,		200V		C5128	NCF21HZ104AY	C	0.1UF,	Z,	50V
⚠	C2520	QFZ0119304S	P	0.3UF,		200V		C5129	NCF21HZ104AY	C	0.1UF,	Z,	50V
	C2524	QFLC1HK104MZ	M	0.1UF,	K,	50V		C5201	QEKC1HM105GM	E	1UF,	M,	50V
⚠	C2525	QFZ01172001S	P	2000PF,		1.4KV		C5202	QEKC1HM105GM	E	1UF,	M,	50V
	C2526	QEHC1EM108MZ	E	1000UF,	M,	25V		C5203	QEKC1HM105GM	E	1UF,	M,	50V
	C2527	QFLC1HJ473MZ	M	0.047UF,	J,	50V		C5301	QEKC1CM106GM	E	10UF,	M,	16V
	C2528	QEHC1CM108MZ	E	1000UF,	M,	16V		C5302	QEKC1HM224GM	E	0.22UF,	M,	50V
	C2529	QEHC1EM108MZ	E	1000UF,	M,	25V		C5303	NCB21HK223AY	C	0.022UF,	K,	50V
⚠	C2530	QFZ01177001S	P	7000PF,		1.4KV		C5304	QEKC1HM105GM	E	1UF,	M,	50V
⚠	C2531	QFZ01174701S	P	4700PF,		2KV		C5401	QEKC1HM105GM	E	1UF,	M,	50V
⚠	C2532	QFZ01177001S	P	7000PF,		1.4KV		C5402	QEKC1HM105GM	E	1UF,	M,	50V
	C2533	QEHC1EM108MZ	E	1000UF,	M,	25V		C5403	QEKC1HM105GM	E	1UF,	M,	50V
	C2538	QEZ0195475MZ	E	4.7UF,	M,	50V		C6201	QEKC1HM475GM	E	4.7UF,	M,	50V
	C2539	QEHB1CM228M	E	2200UF,	M,	16V		C6202	QCS31HJ101AZ	C	100PF,	J,	50V
	C2540	QETC1AM228Z	E	2200UF,	M,	10V		C6203	QEKC1CM336MZ	E	33UF,	M,	16V
	C2541	QETC1CM337Z	E	330UF,	M,	16V		C6205	QEKC1HM475GM	E	4.7UF,	M,	50V
	C2555	QCT25CH470Z	C	47PF,	J,	50V		C6206	QCS31HJ101AZ	C	100PF,	J,	50V
	C2556	QCT25CH680Z	C	68PF,	J,	50V		C6207	QEKC1CM336MZ	E	33UF,	M,	16V
	C2557	QCT25CH560Z	C	56PF,	J,	50V		C6210	QCS31HJ101AZ	C	100PF,	J,	50V
	C2558	QFV71HJ104MZ	P	0.1UF,	J,	50V		C6220	QEKC1HM475GM	E	4.7UF,	M,	50V
	C2559	QETC1CM107Z	E	100UF,	M,	16V		C6221	QCS31HJ101AZ	C	100PF,	J,	50V
	C2561	QEN61HM474Z	E	0.47UF,	M,	50V		C6230	QFLC1HJ333MZ	M	0.033UF,	J,	50V
	C2562	QEN61HM475Z	E	4.7UF,	M,	50V		C6231	QFLC1HJ333MZ	M	0.033UF,	J,	50V
	C2601	QFLC1HJ103MZ	M	0.01UF,	J,	50V		C6281	QEKC1CM107MZ	E	100UF,	M,	16V
	C2602	QEHC1CM107MZ	E	100UF,	M,	16V		C6282	QEKC1CM107MZ	E	100UF,	M,	16V
	C2603	QFV71HJ104MZ	P	0.1UF,	J,	50V		C6283	QEKC1CM107MZ	E	100UF,	M,	16V
	C2701	QETC1HM106Z	E	10UF,	M,	50V		C6284	QEKC1CM107MZ	E	100UF,	M,	16V
	C2702	QEHC1HM107MZ	E	100UF,	M,	50V		C6285	QETC1CM476Z	E	47UF,	M,	16V
	C2703	QEHC1CM337MZ	E	330UF,	M,	16V		C6301	QFLC1HJ103MZ	M	0.01UF,	J,	50V
	C2704	QEHC1EM107MZ	E	100UF,	M,	25V		C6302	QCS31HJ101AZ	C	100PF,	J,	50V
	C2705	QEN61EM107Z	E	100UF,	M,	25V		C6601	QCS31HJ181AZ	C	180PF,	J,	50V
	C2801	QEHB1VM108M	E	1000UF,	M,	35V		C6602	QCS31HJ181AZ	C	180PF,	J,	50V
	C3301	QCS31HJ221AZ	C	220PF,	J,	50V		C6603	QETC1HM105Z	E	1UF,	M,	50V
	C3302	QCS31HJ221AZ	C	220PF,	J,	50V		C6604	QCS31HJ390AZ	C	39PF,	J,	50V
	C3303	QCS31HJ181AZ	C	180PF,	J,	50V		C6605	QCS31HJ181AZ	C	180PF,	J,	50V
	C3313	QFLC1HJ122MZ	M	1200PF,	J,	50V		C6611	QCS31HJ181AZ	C	180PF,	J,	50V
	C3321	QETC2EM105Z	E	1UF,	M,	250V		C6612	QCS31HJ181AZ	C	180PF,	J,	50V
	C3501	QETC2EM105Z	E	1UF,	M,	250V		C6613	QETC1HM105Z	E	1UF,	M,	50V
	C3503	QCZ0121102M	C	1000PF,	P,	3KV		C6614	QCS31HJ390AZ	C	39PF,	J,	50V
	C3504	QFLC1HJ333MZ	M	0.033UF,	J,	50V		C6615	QCS31HJ181AZ	C	180PF,	J,	50V
	C3505	QFP32GK563M	P	0.056UF,	K,	400V		C6621	QCS31HJ181AZ	C	180PF,	J,	50V
	C3506	QCS31HJ561AZ	C	560PF,	J,	50V		C6622	QCS31HJ181AZ	C	180PF,	J,	50V
	C4101	QEKC0JM107MZ	E	100UF,	M,	6.3V		C6623	QETC1HM105Z	E	1UF,	M,	50V
	C4102	QCZ0207104AZ	C	0.1UF,	Z,	50V		C6624	QCS31HJ390AZ	C	39PF,	J,	50V
	C5101	QEKC1CM476MZ	E	47UF,	M,	16V		C6625	QCS31HJ181AZ	C	180PF,	J,	50V

	Ref. No.	Part No.	Description
	C6630	QCS31HJ181AZ	C 180PF, J, 50V
	C6641	QETC1CM107Z	E 100UF, M, 16V
	C6701	QETC1HM475Z	E 4.7UF, M, 50V
	C6702	QCS31HJ101AZ	C 100PF, J, 50V
	C6703	QCS31HJ101AZ	C 100PF, J, 50V
	C6704	QETC1CM476Z	E 47UF, M, 16V
	C6707	QETC1CM476Z	E 47UF, M, 16V
	C6711	QETC1HM475Z	E 4.7UF, M, 50V
	C6712	QCS31HJ101AZ	C 100PF, J, 50V
	C6713	QCS31HJ101AZ	C 100PF, J, 50V
	C6714	QETC1CM476Z	E 47UF, M, 16V
	C6715	QCS31HJ101AZ	C 100PF, J, 50V
	C6717	QETC1HM106Z	E 10UF, M, 50V
	C6718	QCS31HJ101AZ	C 100PF, J, 50V
	C6721	QCS31HJ150AZ	C 15PF, J, 50V
	C6722	QCS31HJ820AZ	C 82PF, J, 50V
	C6723	QCS31HJ221AZ	C 220PF, J, 50V
	C6731	QETC1HM475Z	E 4.7UF, M, 50V
	C6732	QCS31HJ101AZ	C 100PF, J, 50V
	C6733	QCS31HJ101AZ	C 100PF, J, 50V
	C6734	QETC1CM476Z	E 47UF, M, 16V
	C6735	QCS31HJ101AZ	C 100PF, J, 50V
	C6737	QETC1HM106Z	E 10UF, M, 50V
	C6738	QCS31HJ101AZ	C 100PF, J, 50V
	C6741	QCS31HJ150AZ	C 15PF, J, 50V
	C6742	QCS31HJ820AZ	C 82PF, J, 50V
	C6743	QCS31HJ221AZ	C 220PF, J, 50V
	C6751	QEKC1HM475GM	E 4.7UF, M, 50V
	C6752	QCS31HJ101AZ	C 100PF, J, 50V
	C6781	QETC1CM227Z	E 220UF, M, 16V
	C6783	QFLC1HJ104MZ	M 0.1UF, J, 50V
	C6784	QFLC1HJ104MZ	M 0.1UF, J, 50V
	C6785	QETC1CM107Z	E 100UF, M, 16V
⚠	C9001	QCZ9033472A	C 4700PF, M, 125V
⚠	C9002	QCZ9033472A	C 4700PF, M, 125V
⚠	C9003	QFZ9035474M	M 0.47UF, M, 125V
⚠	C9004	QFZ9035474M	M 0.47UF, M, 125V
⚠	C9005	QCZ9033472A	C 4700PF, M, 125V
⚠	C9006	QCZ9033472A	C 4700PF, M, 125V
⚠	C9007	QCZ9033332A	C 3300PF, M, 125V
⚠	C9009	QCZ9033332A	C 3300PF, M, 125V
⚠	C9010	QEZ0144477R	E 470UF, M, 400V
	C9012	QCY32HK103A	C 0.01UF, K, 500V
	C9013	QCY32HK103A	C 0.01UF, K, 500V
	C9018	QEHC1HM226MZ	E 22UF, M, 50V
	C9019	QFP31HJ152SZ	P 1500PF, J, 50V
	C9020	QEHC1HM105MZ	E 1UF, M, 50V
	C9021	QFLC1HJ103MZ	M 0.01UF, J, 50V
	C9022	QEHC1HM475MZ	E 4.7UF, M, 50V
	C9023	QFLC1HJ222MZ	M 2200PF, J, 50V
	C9024	QCS31HJ121MZ	C 120PF, J, 50V
	C9025	QEHC1EM107MZ	E 100UF, M, 25V
	C9026	QFLC1HJ473MZ	M 0.047UF, J, 50V
	C9027	QEN61HM105Z	E 1UF, M, 50V
	C9029	QFLC1HJ472MZ	M 4700PF, J, 50V
	C9036	QFLC1HJ103MZ	M 0.01UF, J, 50V
	C9038	QEHB1EM338M	E 3300UF, M, 25V
	C9039	QEHB1EM228M	E 2200UF, M, 25V
	C9040	QETC1AM227Z	E 220UF, M, 10V
	C9043	QETC1AM107Z	E 100UF, M, 10V
	C9044	QETC1HM476Z	E 47UF, M, 50V
	C9046	QEHB2CM227M	E 220UF, M, 160V
	C9049	CEX41161-001	ELECTROLYTIC CAPACITOR
	C9050	CEX41161-001	ELECTROLYTIC CAPACITOR
	C9051	CEX41161-001	ELECTROLYTIC CAPACITOR
	C9516	QETB2AM477	E 470UF, M, 100V
	C9517	QETB2AM477	E 470UF, M, 100V

	Ref. No.	Part No.	Description
		OTHERS	
	CF5101	CST8.00MTW	CRYSTAL
	CN1001	CHA401N25P-J	CONNECTOR
	CN1002	CHA401N25P-J	CONNECTOR
	CN6002	CHA401N25R-J	CONNECTOR
⚠	CP2001	ICP-N75-Y	PROTECTOR
	DL1101	CE41577-002	DELAY LINE
	DL1102	CE40959-001	DELAY LINE
	DL1201	CE41489-001	DELAY LINE
⚠	F9001	QMF51E2-4R0S	FUSE (4A)
	J6201	CEMB010-004	BNC CONNECTOR
	J6202	CEMB010-004	BNC CONNECTOR
	J6301	QMCC006-C01	CONNECTOR
	J6302	QMCC006-C01	CONNECTOR
	J6601	CEMN070-001	JACK
	J6602	CEMN070-001	JACK
	J6603	CEMN070-001	JACK
	J6701	CEMB010-004	BNC CONNECTOR
	J6702	CEMB010-004	BNC CONNECTOR
	J6801	QMCC502-C01	JACK
	K9902	CE41923-001	CORE
	K9903	CE41923-001	CORE
	K9905	CE42050-001Z	CORE
⚠	LF9001	CE41775-003	LINE FILTER
⚠	LF9002	CE41775-003	LINE FILTER
⚠	PC9001	CNY17F-C1	PHOTO COUPLER
	RTL	FX-M004A	CIRCUIT BOARD (V. SAW MODULE)
	RTL	FX-1072A	CIRCUIT BOARD (SIGNAL)
	RTL	FX-2033A	CIRCUIT BOARD (DEFLECTION)
	RTL	FX-3037A	CIRCUIT BOARD (CRT SOCKET)
	RTL	FX-4039A	CIRCUIT BOARD (FRONT CONTROL)
	RTL	FX-5019A	CIRCUIT BOARD (MICOM)
	RTL	FX-6053A	CIRCUIT BOARD (INPUT)
	RTL	FX-9043A	CIRCUIT BOARD (POWER)
⚠	RY9002	CESK026-001	RELAY
	S2501	QSS1F22-C09	PUSH SWITCH
	S4101	QSTL535-C01	PUSH SWITCH
	S4102	QSTL535-C02	PUSH SWITCH
	S4103	QSP4H11-C12Z	PUSH SWITCH
	S4104	QSP4H11-C12Z	PUSH SWITCH
	S4105	QSP4H11-C12Z	PUSH SWITCH
	S4106	QSP4H11-C12Z	PUSH SWITCH
	S4107	QSP4H11-C12Z	PUSH SWITCH
	S4108	QSP4H11-C12Z	PUSH SWITCH
	S4109	QSP4H11-C12Z	PUSH SWITCH
	S6201	QSS4C22-C02	SLIDE SWITCH
	S6202	QSS4C22-C02	SLIDE SWITCH
	S6203	QSS4C22-C02	SLIDE SWITCH
	S6701	QSS4C22-C02	SLIDE SWITCH
	S6702	QSS4C22-C02	SLIDE SWITCH
	S6703	QSS4C22-C02	SLIDE SWITCH
	S6704	QSS4C22-C02	SLIDE SWITCH
⚠	SK3001	CE42446-001	CRT SOCKET
⚠	SW01	QSP4D21-C06	PUSH SWITCH
⚠	TH9001	CEKP009-001	THERMISTOR
⚠	VA9001	ERZC10VK621G	VARISTOR
	X1201	CE40668-001	CRYSTAL
	X1202	CE41953-001	CRYSTAL OSC

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